ENVIRONMENTAL PROTECTION AGENCY

Hearing for Reconsideration of the California Air Resources Board's Request for a Clean Air Act Waiver of Preemption for Its New Motor Vehicle Greenhouse Gas Standard

Thursday, March 5, 2009

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Washington, D.C.

P R O C E E D I N G S

MS. OGE: Good morning. I think we're ready to start.

On behalf of the Environmental Protection Agency, I'd like to welcome everybody to this public hearing today. As you know, the purpose of this hearing is to receive oral testimony regarding EPA's reconsideration of the California waiver's request to enforce its own motor vehicle greenhouse gas emission regulations.

My name is Margo Oge. I'm the director of the Office of Transportation and Air Quality with the Environmental Protection Agency. And we're welcoming you to a Federal building, an EPA building here for this public hearing.

With me -- today, I'm going to be the presiding officer. I do have to step out for another meeting at 11:00 a.m., and Karl Simon is going to be the presiding officer for the remaining of this hearing. With me on the panel is Karl Simon. On my left is Dave Dickinson and Michael Horowitz with our Office of General Counsel.

Before I start, I want to let you know that we appreciate that many of you traveled far away to be with us here this morning. My staff and I and the administrator, Lisa Jackson, recognize the significance of this issue for the State of California, the significance of this issue for the industry, for other States that have adopted the California program, environmental groups, and private citizens. So we are really very pleased that there is such a wide representation here today, representing all the stakeholders.

On January 21, 2009, California requested that EPA reconsider its waiver denial of the new motor vehicle greenhouse gas standards. On January 26, 2009, President Obama issued a memorandum to EPA's administrator, Lisa Jackson, requesting that EPA assess whether EPA's prior waiver denial decision was appropriate in light of the Clean Air Act requirements.

Administrator Jackson announced that EPA was commencing a process to reconsider the denial, and a Federal Register notice was published on

February 12, 2009. The notice announced both the hearing today and also announced that there is a written comment period that will close end of April 5, 2009. So we hope that your testimony today, many of you would like to supplement it with written comments, and the comment period will stay open until April 5 of 2009.

Now, some administrative procedure steps. We need to let you know that we're conducting this hearing in accordance with Section 209(b) of the Clean Air Act, under which EPA provides interested parties the opportunity for both oral presentations and written comments.

We are having this hearing recorded, and the transcripts will be available both at EPA's docket, and electronically, it will be available at the Web.

The hearing will be conducted informally, and formal rules of evidence do not apply. However, as a presiding officer for this morning and Karl Simon as the presiding officer for the remaining of this public hearing, we are authorized to strike from

the record statements which we deem are irrelevant or needlessly repetitious and to enforce a reasonable timeframe, given the fact that so many people are testifying today.

The witnesses are requested to state their name, their affiliation, prior to making the oral testimony. And when the witness has finished his or her testimony, the panel here with me this morning may ask questions concerning issues raised at their testimony.

At the conclusion of the day's testimonies, these oral presentations, CARB may respond briefly to the oral statements of other parties if you feel that it's necessary.

At the outset, I'd like to note that there is an existing administrative record for this waiver, and because some of the stakeholders have provided already written or oral comments that are part of this record, I would ask you to please clarify whether your testimony today supplements or replaces your previous testimonies or positions that you have taken on this issue. And the reason for that is that

it allows the agency the clarity that is needed when we review comments for the final decision.

So, finally, I want to note that we expect that Senator Carl Levin is planning to testify at today's hearing. We expect him to be here after the conclusion of the California panel testimony. And given his pretty tight schedule, we would like to accommodate him.

So we hope that this day is going to go well. Thank you again for participating, for the ones that are here to testify, but also for the ones that are here to listen to this testimony.

So, with that, we'll start with California. So with us today is -- oh, I'm sorry. The Office of General Counsel, and I'm sorry I have to do it to mine, he reminds me that all of us should either put our cell phones on silent or shut them off. And that's very important for this hearing. So thank you, Mike. And I'm the first to do that.

Okay. So we start with the California panel this morning. Good morning. We have Linda Adams with us, former senator Fran Pavley, Mary

Nichols, Tom Cackette, and Kathleen Kenealy.

Good morning, and I would let you please start.

MS. ADAMS: Good morning. Thank you very much.

I'm Linda Adams, secretary of the California Environmental Protection Agency. And first, I would like to extend my thanks to Administrator Jackson for her quick action in setting this important hearing date.

And Governor Schwarzenegger is very sorry that he could not be here today. As you know, this is an issue that the governor has championed for more than 4 years. So he has asked me to read a statement on his behalf today.

So the governor's statement is that today marks renewed hope that California and a growing number of States will finally get to move forward with a common sense policy to reduce greenhouse gas emissions from passenger vehicles. California's standard is the equivalent of taking 6.5 million cars off the road and will make our air cleaner, save

drivers money at the pump, and reduce our Nation's dependence on imported oil.

With nearly 40 percent of our greenhouse gas emissions coming from transportation, putting cleaner cars on the road is critically important to meeting California's environmental goals. This is the first critical step toward significantly reducing global warming pollution from passenger vehicles.

Recognizing the right of California and other States to aggressively reduce their own harmful vehicular greenhouse gas emissions would be an historic win for clean air and for millions of Americans who want more efficient, environmentally friendly cars. California has an extremely strong case, and I trust the EPA will grant us a waiver without delay.

My administration has been fighting for this waiver since late 2005, and we will not give up. This isn't just about California. Thirteen other States and the District of Columbia have adopted California's standards, and five more are actively pursuing adoption. A swift decision by the EPA is

critical to requiring automakers to make more efficient cars that pollute less.

California's vehicle emission standards are cost effective and can be met with off-the-shelf technology. In fact, there are already many models available now in compliance with the final standards that require 30 percent reduction in greenhouse gas emissions by 2016.

And we know they can do even better in the future by developing innovative new technologies and techniques that will ultimately make better cars. This will make the industry more competitive around the world, while laying the groundwork for a cleaner fuel industry that is just waiting to boom.

That concludes the governor's statement. And in addition to representing the governor, I have the distinct honor to introduce the author of this law that led to California's emission standards, and that is California State Senator Fran Pavley.

MS. PAVLEY: Good morning. I'm Fran Pavley, author of this law back in 2001.

And you wanted the clarification on my

testimony. It would supplement the testimony that I presented not only here in Washington, D.C., but at the hearing you held in Sacramento a few years ago.

The conditions leading to California's request to approve the Clean Air Act waiver were both compelling and extraordinary back in 2002, but are even more pronounced today. And that's what I'd like to elaborate on.

Approximately 58 percent of California's greenhouse gas emissions come from the transportation sector, with a majority of those coming from our 25 million automobiles and light duty trucks, which are the primary cause of our greenhouse gas emissions.

I introduced the bill in early 2001, and it was signed into law in 2002 under Gray Davis, and the regulations adopted under the administration of Governor Arnold Schwarzenegger. We had multiple hearings, conferences, and workshops highlighting the impacts of global warming, particularly to California.

And during those hearings, in addition, experts in automotive technology testified that there

were, indeed, cost-effective, virtually off-the-shelf technologies that were available to reduce emissions from the tailpipe of automobiles.

Climate change will bring extraordinary negative impacts to California. Testimony from scientists and university professors detailing these potential changes were added to the findings in the original bill, which I brought with me today, and placed into my legislation.

For example, back in 2002, we knew a strong link existed between greenhouse gases and the formation of ozone pollution. And when temperature rises in California, our air quality does, indeed, get worse. That's why organizations such as the American Lung Association, the California Medical Association, the California Nurses Association, and the list goes on and on -- health experts -- all supported this legislation.

That same year, I attended an international conference on air pollution and climate change, which drove home this clear and compelling link. And at that conference, an engineer from China came up to me

-- and it shows you the link between when California adopts laws and regulations and how it transposes itself around the world. He came up to me and said, "You know, if California hadn't required catalytic converters in your automobiles, we wouldn't be using them today in China."

In the Los Angeles area, where I live, respiratory problems, particularly among our youth, have dramatically increased over the past few decades. Recent reports that I have read estimate that one out of every five children who live in the Central Valley -- places like Fresno -- in California suffer from asthma due to conditions directly related to air quality.

As the temperature gets hotter, many parts of California become increasingly challenging places to live. Back in 2006 -- this is since the legislation passed -- there were a period of several weeks where temperatures exceeded 100 degrees in places like San Bernardino, Woodland Hills, and Fresno. These are all inland valleys.

Health officials attributed to this extreme

heat event over 140 deaths. The elderly and lower income communities who did not have or could not afford air conditioning felt the disproportionate share of these deaths and negative health impacts.

But one of the most serious challenges, in addition to air quality, of climate change is the threat to California's fresh water supply. I chair the State policy committee on water and natural resources, and documented evidence ever since this bill was introduced back in 2001 show earlier melt of our Sierra Nevada snow pack.

And as temperatures warm, more of our precipitation is falling as rain rather than snow. Our elaborate water storage and conveyance system is not designed for this scenario. Climate models predict increased incidence of drought, along with earlier snow melt, which makes management of our reservoirs more difficult and flooding more likely.

Evidence from the California Department of Water Resources of earlier melt in our High Sierra snow pack was included in the State's water plan back in 2002, with the chapter updated every year since

then. The reliability of the Sierra snow pack, essentially our time-release storage mechanism during our long, hot summers, is critical to both agriculture and urban water users.

Today, Californians are faced with the third year of record drought. Reservoirs in northern California are less than half filled, and mandatory water conservations are being adopted in many cities.

Last week, Governor Schwarzenegger declared a statewide emergency due to the shortage of water, and we face mandatory water rationing if the situation does not improve. This will place a terrible strain on our economy and our environment, agricultural sectors, as well as urban users.

An article in the paper last week spoke about the 80,000 agricultural workers in counties close to Sacramento that will lose their jobs due to the drought and recent court rulings to save federally protected endangered species of fish. Entire farm worker communities throughout the State are at risk.

Faster and earlier spring runoff has

increased the risk of floods and put tremendous pressure on our old, structurally weak 1,600 miles of levees that line the California delta. And due to a recent 2005 court decision, California is now liable for the entire State network of levees, even though many were built by local landowners as much as a century ago without the benefit of seismic or even basic engineering.

We are spending billions in general fund and bond monies restoring damaged levees and, in some cases, compensating owners for their property losses. And a recent statistic shows that there are now 500,000 people that live adjacent to these levees with growing concerns about their safety.

We're also concerned in our delta, our water delivery system, about sea level rise and storm surges along our coast that were originally identified in 2002, but projections now show that rising sea levels will increase not only wintertime flooding but bring additional pressure on the fragile delta ecosystem, jeopardizing our drinking water supplies.

And I would like to bring to your attention just one more fact that has changed since the original findings were made, although we made note of wildfires. Intense wind events the past few years, coupled with the drought and drying vegetation, have resulted in wildfire increases in every region of the State.

In southern California, we no longer have a wildfire season, usually September and October with hot Santa Ana winds, but it's now a year-long season. Out of control wildfires are occurring throughout the State on a year-long basis. Thousands of homes have been lost. Air pollution has increased, causing additional health problems. Wildlife habitat and ecosystems have been destroyed, and runoff from soil erosion has impacted water qualities.

Firefighters and equipment are stretched to their capacity. And in fact, this year in California, we've been having budget problems like everyone else. We had a $42 billion budget deficit. But $1.3 billion of this new deficit was directly related to providing more resources for our

firefighting efforts.

I took an oath of office to protect the health and safety of the 925,000 people who live in my State senate district, and California does, indeed, need to do its fair share reducing the impacts of greenhouse gas emissions. In my opinion, we have met the extraordinary and compelling conditions required for the waiver.

From unleaded gas to catalytic converters, approximately 50 waivers in a row have been granted to California under our exemption to the Clean Air Act. Granting a waiver allows California to continue to serve as a laboratory for innovation.

I want to thank President Obama and, of course, EPA Secretary Lisa Jackson and this panel for reconsidering this denial.

Over 15 States that support the passage of this petition look forward to a revitalized automobile industry, manufacturing cleaner, more efficient cars in order to address one of the most environmentally and economically -- economic challenges of the 21st century. And that is, indeed,

global warming.

I want to thank this panel for your attention.

MS. OGE: Senator Pavley, thank you for your testimony.

We'll go to Ms. Nichols. Good morning.

MS. NICHOLS: Good morning. We have some slides --

Good morning. We have some slides, which I believe will come up on the screen shortly, and I'll try to go through them quickly.

It's a pleasure to be here this morning. It was a year ago this month that we received the published decision denying the waiver that, as you've indicated earlier, had been in the works considerably before that.

And given the pace of administrative decision-making, that's actually pretty rapid action that we now are here today with this request for reconsideration. And we're grateful to the panel for convening so quickly, to the administration for having begun this process almost immediately on

entering office.

This is why you should have these things set up beforehand. It should be ARB over on the right, the lower right icon. There we go. Okay.

Okay. So this is the cover. I don't think you need that. This is a brief outline of what we intend to cover. Tom Cackette, who is the head of the Resources Board's Mobile Sources Program, our chief deputy executive officer, is with me, and the two of us are going to be sharing this presentation.

The next slide here was really covered, I think, very adequately by Senator Pavley. And it really is a pleasure to be sitting next to the author of this program that we are here talking about today. I have to say that.

In recent years, I've discovered that many people have no idea that there actually is a Pavley. Some people think it's an acronym. So I like to remind everybody that there is a real person named Pavley whose standards we're here talking about today.

So first point we want to make here is that

we believe it is appropriate for EPA to review its prior decision. We believe that this agency, as other administrative agencies, has inherent authority to review and to correct mistakes that it has made in the past.

As we've established -- and by the way, I guess I need to respond to your earlier question. This is a supplemental testimony. We're not -- this is no departure from things we've said before. But there are some additional points, I think, that we'll be adding here today.

As we've said many times, the denial of the waiver by Administrator Johnson was a radical departure from the previous practice of EPA over many years, and so we believe that EPA can and should take advantage of the opportunity to evaluate this request, like any other, and to look at our standards that are before you here today as one component of a motor vehicle program that reduces multiple types of pollution. So we're looking at this as part of a congregation, a constellation of standards.

There are really three issues that we

believe EPA can consider in deciding whether to give a waiver. First of all, was the determination that California made arbitrary and capricious in terms of the protectiveness of our air quality?

Secondly, whether California needs these standards as part of a motor vehicle program to address compelling and extraordinary conditions.

And third, if the standards are consistent with Section 202(a), that is, technologically feasible within the lead time provided and giving consideration to costs.

One of the things I think is most startling about Administrator Johnson's decision, just parenthetically here, is the kind of presumption that is threaded through it that the California waiver is somehow a generous act on the part of EPA to allow California to do something different from the Federal law, when history shows the opposite to be the case.

That California was setting standards before there was a Federal Clean Air Act, that Congress recognized that when they adopted the first Clean Air Act amendments in 1970. And each time this

issue has come before Congress in changes to the Clean Air Act, they have continued and, in fact, expanded the ability of other States to use California's standards.

So we think that EPA needs to continue, as it has in the past, to give California substantial deference to protect its own citizens and that the burden of proof needs to be, in this instance, on the opponents to the waiver.

We also believe that many of the issues that have been raised in the course of prior hearings on this issue -- including the argument that there is some sort of a conflict between the Clean Air Act and the APCA or the CAFE standards, as well as foreign policy issues or concerns about the 177 State issues -- are not before you today, are not to be resolved in the course of making the decision on our waiver.

So, on the first prong of this test, protectiveness. Again, California made a decision that our standards that we adopted, pursuant to the Pavley law, were more protective than the applicable Federal standards because, to begin with, our

criteria pollutant standards are more protective. There is no Federal greenhouse gas emission standard. So those gases are not covered at all currently by Federal law.

And our greenhouse gas standards also result in additional improvements in criteria pollutants because of reduced need to produce and transport fuel within California. So there is a multiplier effect on criteria pollutants.

We have fully addressed, we think, the fleet turnover and rebound arguments which were made in the prior decision, which were driven by cost projections for zero emission vehicles and excessive -- assumptions about excessive reliance on hybrids. That evidence is already, we think, in the record, and so we're not going to continue that discussion today.

On the question of compelling and extraordinary conditions, EPA has, I think, the ability to read Section 209(b)(1)(B) to apply to California's entire motor vehicle program, as they have before. Our greenhouse gas regulations are

within a program that addresses historical California conditions and has always done so, including the climatic conditions, large human and vehicle population, our diverse topography.

The fact is, unfortunately, despite heroic efforts, we still have the worst air pollution and the largest number of people who are affected by air pollution of any State in the country. In addition, as you've already heard, global warming is more pronounced in California, and it exacerbates these longstanding, compelling, and extraordinary air pollution conditions. And I have some further slides that illustration this point.

California's motor vehicle program has been extraordinarily successful in cutting emissions from vehicles, and yet, still, over 90 percent of our population still breathe air that has been branded unhealthy by the Federal Government at various times during the year.

We have 12 percent of the United States population, but 40 percent of the Nation's exposure to the 8-hour ozone standard violations, 60 percent

of the Nation's exposure to PM2.5 above the annual standard. Therefore, I think it's obvious that our population is disproportionately exposed.

Recent science also more clearly establishes the link between higher temperatures and smog. The clear linear relationship is shown here downwind of the south coast, as well as for Fresno, which is the San Joaquin Valley's population center.

We believe that California standards need to be evaluated in the aggregate, not pollutant by pollutant. This is the way it's been done in previous waiver decisions and reflects the reality that people do not breathe one pollutant at a time.

California's conditions for climate change don't have to be unique or more severe than in other States -- and again, this is based on prior EPA decisions -- they only need to be compelling and extraordinary. But the impacts are, indeed, compelling and extraordinary cumulatively, and for air quality, they are clearly more severe.

We have slide number eight, which I think is the next -- oh, I'm sorry. That was the slide you

just saw, excuse me, going backwards showed the disproportionate impact. And another witness here today, I believe Professor Mark Jacobson, is also going to address the issue of disproportionate impact.

So we additionally have other non-air quality impacts that are also more severe in California, and this is the map that we have that shows hot spots from California, hot spots due to climate change, and indicates the areas where the greatest change as well as the least change are projected to occur.

The changes are expected to be regional in nature. In fact, as science accumulates on this topic, it's clear that the impacts are going to be quite different in different places. But clearly, there will be greater temperature increases and precipitation changes in southern and central California -- in other words, right in the heart of both our population centers and our agricultural regions.

Climate change is also going to undermine

our current air pollution control efforts. This slide summarizes recent UC-Berkeley research from four California air basins, including the south coast air basin. The left bars in each of these show that without climate change, we could expect continued progress toward ozone reduction in all of our air basins.

The middle set shows that without additional controls, but with projected climate change, there will be a climate penalty, a worsening of ozone due solely to the effects of climate change. The combined effects are shown in the bars on the right. In other words, the climate penalty offsets control progress.

Clearly, this ties to California's greenhouse gas standards -- this ties California's greenhouse gas standards to our longstanding air quality conditions that climate change just makes worse.

In addition to the air quality impacts, there are also greater impacts on other California resources that are just shown here on these slides.

And just to briefly recap -- the loss in snow pack, sea level rise, more extreme heat days, 80 percent more likely ozone days, 55 percent more large forest fires, which is hard to envision in light of what we are already experiencing, and twice the number of drought years.

The graph on the lower -- the upper left, I'm sorry, shows that sea level rise will be dramatic even without the rapid polar icecap melt that we're already seeing now and even with substantial controls. Still, we can reduce these impacts already affected by increasing temperatures, sea level rise, et cetera. We can help ameliorate these problems.

The 2008 -- I'm sorry, 2006 California climate assessment showed impacts to the State's water supply, public health, agriculture, coastlines, and forestry. 2008 assessment updates more firmly tie the temperature, snow pack, and water runoff in the Western U.S. to global warming and shows the air quality impacts of wildfires, which, in addition to their other serious economic and health impacts, also have direct impacts on air quality and shows

California as a biodiversity hot spot that can expect the current ecological impacts to dramatically accelerate. And this information is going to be added to supplement what's already in your docket.

So, in conclusion, we believe that EPA made a mistake in March 2008. It applied the wrong test by isolating greenhouse gases from other pollutants. It wrongly applied that new test. Evidence in the docket showed that vehicular greenhouse gases do have local and regional air quality impacts. They ignored the upstream criteria pollutant reduction from reduced fuel processing.

EPA's alternative theory, we believe, was also wrong. That is California's air quality impacts are, indeed, worse, both individually and cumulatively.

We believe that EPA can correct this error by taking a broader view of the greenhouse gas standards in the context of our overall motor vehicle control program, that EPA can and should the California standards both reduce conventional pollutants that exacerbate longstanding air quality

impacts, and EPA can find that California standards address other compelling and extraordinary resource impacts within the State of California.

Thanks.

I'm now going to turn over the next portion of this presentation to Tom Cackette.

MR. CACKETTE: Thank you, Mary.

I'm Tom Cackette. I'm the deputy director of the California Air Resources Board, and the rest of the comments of ARB will also supplement what was presented in the previous hearing.

I want to start off with just the framework here -- if I can get on the right slide -- the framework for the consistency with 202 part of the waiver criteria, and then talk about what's new since the last hearing in terms of technology and progress to meet low greenhouse gas standards.

For decades, EPA has interpreted this waiver provision as permitting EPA to review the technological feasibility and lead time California provided to meet its adopted emission standards, including consideration of the costs that affected

industry may incur.

In doing so, EPA has traditionally applied either the NRDC or the international D.C. Circuit Court cases, or a mixture of both, all under a very narrow standard of reviewing, giving substantial deference to California's weighting of costs, risks, and benefits in order to further congressional intent for California to serve as a laboratory for innovation. That precedent applies to California's greenhouse gas emission standards as well.

The NRDC test should apply here because California provided several years -- and in the case of the 2016 endpoint, a decade -- of lead time to the industry. As you'll see in the next slide, we determined that the principal technologies needed for compliance were nearly all off-the-shelf and not requiring technological breakthroughs that would require a large amount of lead time.

Even in the international test, which looks at the nearer term compliance, even if that is applied, we believe that a combination of manufacturers' statements and plans indicate that

manufacturers are already in compliance or, with minor changes, can demonstrate compliance in the early model years, namely the period 2009 through '11.

And I must remind EPA that in this waiver proceeding, no individual manufacturer has come forward with data showing that they could not comply. All we have are association and consultant statements that received a thorough drubbing in court and that defy the reality shown by more recent EPA and EPA-sponsored reports.

And as the final part of my overview, California's procedures are consistent with the EPA's because while we encourage EPA to set national GHG emission standards with associated test procedures, there are none to date for which California would be inconsistent.

So, now on to the technological stuff. We presented this chart, the black lettering part of this chart last time. And what I've done is updated it to show you additional manufacturers that have adopted the list of technologies on the left that we

believe are critical to achieving lower greenhouse gas emissions. And I think you can see from the predominance that just in a short period of time, there has been tremendous expansion of the use of these key technologies by a wide variety of vehicle manufacturers.

Here is a kind of an interesting and critical change. When we adopted our standards, we looked at downsizing of engines and turbocharging of gasoline direct injection engines as a key technology. But the overwhelming comments by the auto industry were that those technologies would not work on trucks, that trucks could not use downsized engines because they have to tow heavy trailers. They've got to tow heavy loads. It was simply a technology that didn't work.

Well, here is Ford Motor Company with a different viewpoint. They plan on using downsized, turbocharged, direct injection engines -- they call them "EcoBoost" -- in their Ford F-150 pickup truck, the largest-selling pickup truck in the United States.

So here, we set the standards without assuming the use of this technology, and now this technology is going to roll out in the timeframe of the Pavley standards and will be one more tool that the auto manufacturers can use to reduce light truck emissions.

Here we take a look at General Motors' restructuring plan, which was submitted to the Department of the Treasury recently, and you can see the list of technologies and the three timeframes that they're talking about -- underway now, 2012, and 2015. And that list of technologies that they're pursuing looks startlingly the same as the list of technologies that we developed in 2003 and '04 and was the basis for us setting the standards. Clearly, this large manufacturer is pursuing almost all of the technologies that we believe are critical to reducing greenhouse gas emissions.

When we adopted the standards in 2004, and as we shared with you last time at the waiver hearing, we did not assume that any substantial number of hybrid electric vehicles would be in place.

In fact, what we assumed as an available technology was a simple integrated starter generator system, basically a start-stop system for vehicles in the second half of the Pavley phase-in.

But what you see here, again from General Motors, is that hybrids are coming, and they're coming in large numbers. So not only does General Motors have belt alternator, simple low-cost sort of start-stop type systems, but they are envisioning an expansion of their more aggressive hybrid electric vehicles throughout their fleet, here some 26 models by 2014.

Another technology that was somewhat speculative at the time was camless valve actuation, and we showed that as being a useful technology in the second half of the Pavley phase-in. What we show here is that Valeo has recently introduced that camless valve actuation, at least on the intake side, will be in a production vehicle in the 2011 model year.

And perhaps equally important is BMW has had this extremely sophisticated continuously

variable valve system, shown up here in the left-hand corner, on almost all of their vehicles. But now other manufacturers are adopting that, too. And you can see that similar system is on the Nissan, the Infiniti vehicle, and also Honda has a very advanced system coming out as well.

And this is key because variable valve timing and lift is one of the other extremely effective technologies for reducing greenhouse gas emissions, and more manufacturers are now adopting it.

Likewise, in the 2004 assessment, we assumed no diesel vehicles. There was certainly a question at that time whether they could meet Bin 5 and the California LEV standards.

Well, since then, manufacturers have made that -- stepped up to that challenge, and you can see a whole host of diesel vehicles which are being introduced nationwide, 50 State, all of which get lower greenhouse gas emissions and provides one more tool that we didn't really consider back in 2004 that's now available to meet the greenhouse gas

standards.

Likewise, we assumed that there would be a refrigerant replacement back in 2004 to HFC-152a. That refrigerant probably is not going to be the one that's used, but there was certainly speculation at that time whether a refrigerant could be used, a new refrigerant could be developed and used and what the costs were.

Since then, a new refrigerant, 1234yf, has been developed. It actually has a lower global warming potential than the one we assumed, and it's much closer to a near drop-in type of technology. The one we assumed would have required a double-loop system and some complication.

So here, again, development has exceeded our expectations, resulted in relatively low cost, relatively simple system that's better than what we even assumed back in 2004. And this is really important because I think people don't always grasp how much the air conditioning credits count. But in fact, you can get on the order of double-digit, 12 to 15 or so type CO2 equivalent credits for improving

your air conditioning system. And that's a lot of -- brings you a long ways towards complying with the Pavley standards.

Here are a couple of things on lead time. The supplemental question that EPA asked in its February notice for this hearing was what effect, if any, EPA's denial in March 2008 has on its current evaluation of consistency with 202(a) regarding notably lead time. We believe there is no effect.

The manufacturers with the greatest compliance challenge admitted in court that they could meet the early year standards, 2009 and 2010. Since then, since that court case in Vermont, the market trends have made their job easier. People are buying the smaller end of -- more smaller end of the cars, more smaller end of the truck categories, which makes compliance easier.

Analysis, people have done analysis of GM's restructuring plans, which suggest that their future plans are consistent with the Pavley standards. And Chrysler has stated that it will do its best to comply without limiting model and availability.

That's in stark contrast to their testimony in Vermont, which said the only car that would be available is the Smart Car.

Second, the industry could be under no illusions that California was backing down on seeking full enforcement of the standards for every model year. Upon denial of the waiver, we immediately sued EPA. Congressional probes questioned EPA's decision-making, and both major presidential candidates campaigned on a pledge to revisit the decision. Obviously, our governor continued to speak out that we needed this waiver, and our program needed to be implemented.

So it's clear that we continued to push forward, and we believe that the manufacturers should and did continue to push forward on developing the technology to comply.

Finally, the year period since denial of the waiver is small compared to the 4 to 10 years of lead time available to comply with the 2011 through 2016 model year standards, and the significance of this brief period has been obscured by the rapid

deployment of technologies and the shift in market trends.

So, in summary, the technology is ready. The manufacturers are exceeding our expectations, developing better and more aggressive and more effective technologies than we had envisioned when we adopted these standards. The program is on track for compliance with all of the model years.

So I'd now like to turn it back to Chairman Nichols for our concluding remarks.

MS. NICHOLS: Thank you, Tom.

Time has only continued to strengthen California's case as to why this program is necessary and to make the circumstances even more extraordinary and compelling. EPA is doing the right thing by reconsidering its prior action. We believe that there is no basis for denying the waiver, and we're available for questions.

Thank you.

MS. OGE: Well, I'd like to thank both Ms. Nichols and Mr. Cackette for your testimony.

And now we will go with Ms. Kathleen

Kenealy. Good morning. Welcome.

MS. KENEALY: Good morning. My name is Kathleen Kenealy. I'm a deputy attorney general with the California Department of Justice.

The attorney general, Jerry Brown, has asked me to come here today and read a letter on his behalf into the record. We've submitted the letter into the docket, and the letter supplements the attorney general's earlier comments.

The attorney general is thankful to President Obama and to the EPA for acting so quickly to open up this proceeding to reconsider the waiver decision, and he, unfortunately, could not be here today and sends his regrets. And here is the letter.

These comments are submitted in support of California's waiver application. I strongly support EPA's decision to reconsider its decision denying the waiver. The denial was an error on both legal and factual grounds. EPA's willingness to review that decision represents an important step after years of Bush administration resistance to environmental protection.

I intend to submit more detailed comments addressing both the factual errors and legal defects in EPA's waiver denial decision. Today, however, I make two points. First, EPA's decision to reconsider its waiver denial is proper. Second, given the urgency of dealing with global warming, EPA should grant California's waiver as soon as possible.

EPA's decision to reconsider its denial of California's waiver request is both sound and legally correct. There are substantial defects in EPA's waiver denial decision that require correction, and it makes sense for EPA, the expert administrative agency, to cure its own mistakes.

In this denial, EPA parted from longstanding past practice and considered whether California's GHG emission standard was needed to meet compelling and extraordinary conditions related to a specific pollutant, GHG emissions. Until this decision, EPA had looked at California's emissions program in its totality, as the Clean Air Act requires.

California's separate emissions program has

long been approved because of the State's climate, geography, extraordinarily severe air quality problems, and the large number and concentration of motor vehicles contributing to these problems.

The administrator also determined that climate change impacts in California were not sufficiently different from the Nation as a whole and, therefore, did not support adoption of State standards regulating motor vehicle greenhouse gas emissions. This conclusion ignores that California continues to have compelling and extraordinary conditions justifying its own mobile source program and that the impacts from climate change will be particularly severe in the State, given California's extensive coastline, significant dependence on snow pack for water supply, vulnerability to floods and wildfires, severe ozone problem, and other impacts.

These fundamental errors, among others, undermine legitimacy of the waiver denial because they misconstrue the Clean Air Act and depart from decades of prior sound agency practice.

In the landmark case Massachusetts v. EPA,

the Bush administration fought to avoid its responsibility to deal with the threat of global warming. It took the case all the way to the U.S. Supreme Court, which rejected its arguments and ruled that global warming emissions are pollutants under the Clean Air Act.

Even after the court's decision, EPA delayed taking any action on greenhouse gases for close to 2 years. EPA's decision denying California's waiver was another attempt to avoid the agency's obligation to administer the Clean Air Act as Congress wrote it. Now that EPA is reconsidering that decision, California looks forward to working with EPA so that these important standards can finally become effective.

Global warming is arguably the most urgent environmental issue of our time. Our way of life and perhaps even our survival depend on our response to this problem. The regulations before you are a first bold step toward dealing with global warming. They are ready to be enforced.

Without Congress's foresight in allowing

California its important leadership role in setting automobile emission standards, we would not have these ready-to-implement regulations today. All we need is a waiver from EPA. The waiver is long overdue. We have been waiting since 2005 for it.

Fourteen States, plus the District of Columbia, have adopted California's greenhouse gas emissions regulations, with another four States in the process. The 14 States represent 37 percent of the Nation's vehicles, and the 4 States in the process will raise that level to approximately 47 percent.

There are several more States debating whether to adopt the program. And if they move forward, it will represent over half the Nation. We are optimistic that EPA will, upon reconsideration, grant California's waiver request, thereby allowing California's standards to become effective.

EPA, therefore, should waste no time in granting California's waiver application. I am confident that upon reconsideration, the agency will determine that the request is consistent with the

Clean Air Act and must be granted.

Sincerely, Edmund G. Brown, the attorney general of the State of California.

Thank you.

MS. OGE: Thank you, Ms. Kenealy.

I'd now like to ask the panel if we have any questions for the California delegation?

[No response.]

MS. OGE: I believe that I heard both from Ms. Nichols and Cackette that you're going to supplement the record with written testimony by April 5th?

MS. NICHOLS: Yes, we will.

MS. OGE: So we're looking forward to review your written statements.

Thank you so much. Thank you. We appreciate it.

And I believe we have Senator Levin here with us? So let's see if we can find Senator Levin.

Senator Levin, good morning. I'm Margo Oge. I'm with the Environmental Protection Agency, and we are honored to have you here this morning.

Very unusual that I have a Senator testifying.

SENATOR LEVIN: Well, I don't know if that's good or bad, but thank you.

MS. OGE: We're honored. Thank you so much for taking the time.

SENATOR LEVIN: Well, Director Oge, thank you and members of the panel.

I appreciate the opportunity to testify today relative to California's request for a waiver of preemption under the Clean Air Act.

California was appropriately given waivers to develop stronger standards to deal with their special situation involving smog. California's request for a waiver of greenhouse gas emissions is a totally different matter.

The threat of greenhouse gas emissions is not unique to any State. All of our States have varying problems that result from this menace to our planet. There is an urgent need for Government action to confront this problem, but the need is for a strong national action.

The Clean Air Act preempts a State from

adopting standards to control vehicle emissions unless a waiver is granted by the EPA. And only, as you know, California is permitted to request a waiver, but if granted, other States can then adopt that California standard.

Section 209(b) of the act provides that the EPA administrator determine whether California "needs" different standards from the rest of the Nation in order to meet "compelling and extraordinary conditions."

When Congress created the opportunity for a waiver under the Clean Air Act, it did so in recognition of the fact that California faced unique circumstances with respect to certain pollutants that called for special regulatory latitude. For example, the geography of the Los Angeles basin tends to concentrate emissions of NOx and other pollutants in a way that is particularly harmful to human health and the environment in that area, and Congress recognized that California needs authority to regulate those pollutants.

To date, the EPA administrator has granted

a total of at least 53 waivers to California to set standards for vehicle emissions such as nitrogen oxides, volatile organic compounds or non-methane organic gases, and carbon monoxide. These more stringent California standards have succeeded in improving California's air quality and reducing smog.

Greenhouse gases and global warming, however, present a different set of challenges. Carbon dioxide is a global problem. The global warming impact of a ton of carbon emitted in California is the same as a ton of carbon emitted in any other State or in any other country. And the consequences of this global warming will be felt across all different countries and climates around the world.

Global warming is not unique to California, and to suggest that it is actually undermines the argument that it is a global threat that knows no boundaries. In short, a local regulatory solution is not the answer to a global problem.

As such, there is no basis for granting a waiver to California because California or any single

State alone does not need separate State standards to meet compelling and extraordinary conditions. These conditions are global, and we need a strong national solution.

The most rational way to adopt standards to regulate greenhouse gas emissions from vehicles, therefore, is to develop a national policy that brings together regulation of fuel economy and greenhouse gas emissions. If we take advantage of the unique opportunity to bring these efforts together, we can have a strong national policy that incorporates technology innovation into vehicles sold in the United States and that contributes to reducing our greenhouse gas emissions globally.

The standards should be based on science and technological feasibility, and it should be written in a way that is nondiscriminatory. That is, by applying the same standard for similar size and weight vehicles regardless of manufacturer. That is the approach that Congress used in 2007 in adopting a national nondiscriminatory fuel economy standard for vehicles.

Auto manufacturers need predictability, stability, and adequate lead time to meet new standards. They also need assurance that Federal agencies will work together and set a single consistent standard, and they need assurance that the standards that they must meet will apply nationally rather than State by State.

A single, strong, national standard should incorporate reforms that Congress specifically consciously adopted in 2007 for this country. In other words, it should not be based on the outdated fleet-wide average concept that is no longer used in Federal regulations.

During consideration and debate on the Corporate Average Fuel Economy, the CAFE requirements that were included in the Energy Independence and Security Act of 2007, Congress purposefully decided to eliminate previously discriminatory aspects of CAFE standards that had been set by the Department of Transportation's National Highway Traffic Safety Administration, NHTSA.

In the 2007 act, Congress required that

NHTSA set standards for cars and light trucks based on an attribute-based system, whereby standards are set according to vehicle weight, vehicle footprint, or similar attributes. The 2007 act also required that the overall standard of at least 35 miles per gallon by 2020 be met by the automobile industry as a whole, rather than company by company.

That act ended a longstanding element of the old CAFE system that discriminated against the domestic auto industry by requiring each company to meet a fleet-wide average and not recognizing the inequities of such a system for certain manufacturers.

If a new, strong, nondiscriminatory standard is adopted to address fuel economy and greenhouse gas emissions, we can bring together all of the parties. If EPA were to grant a waiver and California's current greenhouse gas emissions regulations went into effect using a fleet average, it would not only mark a return to the discriminatory practices and policies that we replaced less than 2 years ago in Congress.

There is another discriminatory aspect to the California regulations as currently written. Their regulations would not apply to all auto manufacturers. They exempt -- they would exempt in any State that adopted the California regulations those manufacturers who sell less than 60,000 vehicles in the State of California. So while GM, Ford, and Toyota would have to meet their standard, Hyundai, Land Rover, and Audi, among others, would not.

Finally, the proposed California regulations, when implemented in different States, would result in a compliance patchwork across the country because of the varied sales mix of vehicles in each State. In directing the EPA to reexamine the Bush administration denial of the California waiver, President Obama himself said that he wanted to avoid "a confusing and patchwork set of standards."

Such a patchwork would result in market confusion, and it would not further the goal of achieving a reduction in greenhouse gas emissions from vehicles across the United States. Instead of

focusing energy and resources on technology and innovation so as to have an unambiguous, well-reasoned, and strong national standard to improve fuel economy and reduce greenhouse gas emissions, efforts would instead be focused on meeting a compliance patchwork across the country.

We have an historic and a unique opportunity to address global warming and vehicle fuel efficiency in a strong national standard that recognizes the overlapping nature of these two issues and acknowledges the expertise that Federal and State agencies can bring in addressing them together.

And so, I think that, Director, I want to repeat that point because it really goes to the heart of what I'm saying, and this is really in conclusion. That you have, the administration has an historic opportunity to address global warming and vehicle fuel efficiency in a strong national standard that recognizes the overlapping nature of these two issues and would acknowledge that Federal and State agencies, working together, can address them.

I hope that EPA joins with NHTSA in

adopting a single national standard based on technological feasibility for each class of vehicle. And again, that was the vital reform adopted by Congress in 2007, which finally put an end to the discriminatory features of the old CAFE system. And I would welcome working with the Obama administration, State of California, and other interested parties in achieving that goal.

Again, I want to thank you, Madam Director and other members of the panel, for what you're doing here. And appreciate the opportunity to address you.

MS. OGE: Senator Levin, on behalf of Administrator Jackson, I want to thank you for coming here. We recognize the issues that you have raised, and clearly, your testimony is going to be placed as part of the record. And we will continue the dialogue.

Again, thank you so much for being here.

SENATOR LEVIN: Thanks so much. Thanks to you.

MS. OGE: Now we'll start with our next -- time out. He's the most important person there. So

we better be listening to him. Okay? You need some time?

Are we ready? Okay. He says, yes, we are.

Okay, we'll start with our next panel. Attorney General Gary King, Ms. Navis Bermudez -- I hope I pronounced the name right -- Mark Rupp, David Cash, David Littell, and Shari Wilson.

I think we need an extra chair. Is it there? Okay. Great.

Good morning. We'll start with Attorney General Gary King.

DR. KING: Thank you, Madam Chair.

My name is Gary King, and I'm the attorney general for the State of New Mexico. I'm also a bit unique amongst the attorneys general because I hold a Ph.D. in organic chemistry, and I served on a variety of Federal advisory, environmental advisory boards and was formerly the policy advisor for environmental management for the United States Department of Energy.

I want to thank the panel today and the EPA for allowing New Mexico the opportunity to make some

comments regarding the California waiver request. And as I will explain in my comments, I think that the decision to deny the waiver is legally unsupportable. We in the State of New Mexico also think that the denial is bad public policy.

And I have comments that I will submit. I'm going to divert from them just a little bit because my colleague, Attorney General Brown's letter included some of the things I had. So I'll try and skip over a few of those so that we're not redundant.

We do think, Madam Chair, that the issue today is of national significance, but New Mexico is one of those 13 other States that has adopted the California standards. As a matter of fact, we're the most recent State, I think, to have adopted the California standards.

And the prior decision that was made by the EPA has really forced New Mexico to a standstill in bringing forward and implementing our standards. So, once again, we're very happy that you're reconsidering your request there.

The Section 177 of the Clean Air Act

expressly allows other States to adopt California's standards if, and only if, California has received the waiver. So it's very important to the State of New Mexico that this occurs so that we can move forward with our standards.

While the question of other States' use of California's standards is not before the EPA today, I'm here to underscore the fact that New Mexico's ability and the ability of the other States to take responsible action to address greenhouse gas emissions from motor vehicles is contingent on EPA granting California's waiver. We need to be able to continue to rely on California's leadership on these issues, and we commend them for that.

In New Mexico, we have similar impacts that you've heard about in California. We think that climate change has local impacts in the States. We depend very much on the snow packs in the mountains in New Mexico to provide water for the Rio Grande. And not only does that provide water in the State of New Mexico, but we have to comply with compacts with the State of Texas and with the country of Mexico to

deliver water downstream.

And so, we think that climate change will impact our ability to comply with all of these compacts that we have. We also anticipate potentially serious consequences for domestic and agricultural water use in New Mexico and expect it to increase the intensity and frequency of forest fires, as you've also seen in California.

Because of these risks that are posed for the State of New Mexico by climate change, our State and our governor have implemented a program that seeks to reduce greenhouse emissions to 2000 levels by 2012, to 10 percent below 2000 levels by 2020, and to 75 percent below 2000 levels by 2050.

And I will state, in deference to Senator Levin, we don't believe that any of those standards can be met with the current action that's been taken by the Federal Government. We think that more action is necessary.

New Mexico has a climate change advisory group, which is comprised of representatives from industry, tribal, and local governments and

environmental groups, and they recommended 69 strategies to meet greenhouse gas reduction targets. That advisory group determined that of all of the available strategies, the adoption of California's motor vehicle emission standards is the most cost effective for us in New Mexico.

We also believe that adoption of California's greenhouse standards would reduce transportation-related emission of greenhouse gases by 30 percent in New Mexico by 2016 and would keep an estimated 10.5 million metric tons of carbon dioxide pollution from being released into our air. In other words, the California standards are a critical component of New Mexico's efforts to reduce greenhouse gas emissions.

There are two main legal arguments, and I think that Attorney General Brown raised those in his letter, but I will reiterate just shortly. Along with 18 other States, New Mexico has challenged the EPA's denial of the California waiver request, basically making the argument that it is arbitrary and capricious and contrary to law.

We also find it significant that the EPA technical and legal staff found that California had met requirements of Section 209(b) of the Clean Air Act and that there were not any good arguments against granting the waiver. When the previous administrator denied the waiver then, we feel like he was second-guessing the determination of the State and also overruling the sound technical advice of his staff.

So, two quick points. First, we believe that Administrator Johnson erred in applying the waiver criteria to California's greenhouse gas emission standards separately from the motor vehicle program as a whole, and I think that you heard a good argument on that from the California folks. So I will not reiterate that.

Secondarily, we believe that Administrator Johnson arbitrarily imposed a new limitation on the waiver analysis really by -- in two points. We think that Administrator Johnson created a -- determined that a waiver is only proper where California seeks to address local conditions. Once again, I think

that that's one of the key arguments, and you heard Senator Levin try and address that on the side.

But local conditions like smog as opposed to climate change, we don't think that there is any statutory basis for this limitation. New Mexico was one of the States that joined in Massachusetts v. EPA, and in that case, the Supreme Court recognized that the Clean Air Act is broad enough to encompass carbon dioxide and the language of the Clean Air Act's waiver provisions in Section 209 more than sufficiently broad to address circumstances related to climate change.

So we believe that that's covered under Section 209. We're very pleased with the findings in Massachusetts v. EPA and very supportive of that.

Reduction in greenhouse gas emissions from autos in California and other States that would also impose these standards would result in globally significant reduction of greenhouse gas emissions. And as the Supreme Court acknowledged in Massachusetts v. EPA, a reduction in domestic emissions would slow the pace of global emission

increases no matter what happens elsewhere.

The reduction in tailpipe greenhouse gas emissions would bring a commensurate reduction in risk of climate change impacts to California and to New Mexico. Therefore, as a legal matter, there is no basis for limiting the waiver provisions to instances where standards only address localized air quality problems.

As a practical matter, absent incremental nonglobal measures to reduce greenhouse gas emissions, the problem of climate change cannot be solved. And I guess that's my major point today, Madam Chair, is that we in the States don't believe that there has been a concerted effort at the national level to deal with greenhouse gas emissions.

We do believe in the States as those laboratories of democracy, where we can move things forward whenever there is gridlock at a national level. Clearly, there are many States that are supporting California's effort. We believe that, as we move forward in this and as the waiver is granted to California, that more States will join and that we

will truly come to a national standard that is protective of our States and our climate.

So with that, Madam Chair, I will just state my conclusion. We appreciate the opportunity to present New Mexico's point of view and concerns about this crucial issue. We once again applaud the EPA for reconsidering the denial of California's waiver request, and we urge the EPA to properly consider the law and the merits of California's request and grant the waiver.

Thank you.

MS. OGE: Mr. King, thank you so much for your testimony.

Now we will go with Ms. Navis Bermudez. I hope I'm pronouncing it right. Close? Good morning.

MS. BERMUDEZ: Good morning. Thanks for having me here.

My name is Navis Bermudez, and today I'm testifying on behalf of the New York State governor, David A. Patterson. New York Department of Environmental Conservation will also be submitting more detailed comments for the record.

Thank you for the opportunity to be here today. New York supports the issuance of the waiver, and we're very pleased to see that EPA is willing to reconsider the unlawful and misguided decision last year to deny the waiver.

The Clean Air Act specifically permits States to adopt California motor vehicle emission standards that are more stringent and protective of human health and the environment than Federal standards. California's leadership in motor vehicle emissions control has been and continues to be critically important to New York and many other States in meeting our air quality objectives.

Just as it has for other pollutants in the past, New York adopted California's regulations for reductions of greenhouse gas emissions from motor vehicles in November of 2005, and they become effective in December of 2005. We look forward to continuing the strong working relationship between New York and California as we begin to implement strategies for reducing emissions of greenhouse gases from the transportation sector.

As my colleague from New Mexico mentioned, there has been an absence of Federal leadership on climate change. Therefore, New York and a number of other States have begun to take action to reduce greenhouse gas emissions from motor vehicles, power plants, and other sources. For example, New York and nine other States participate in the regional greenhouse gas emissions initiative, a market-based cap and trade program designed to reduce greenhouse gas emissions from the power sector.

And New York is also joining other States in an effort to assess a low-carbon fuel standard for transportation and heating oils. These efforts and similar efforts by other States have begun to place this Nation on a path to achieving the reductions that scientists say are needed.

In New York, motor vehicles account for more than one-third of our greenhouse gas emissions, with carbon dioxide being the pollutant of greatest concern. The most efficient near-term means of reducing these emissions is through the use of advanced engine, transmission, and air conditioner

technology to cause reductions at their source.

Over the longer term, however, more fundamental changes to propulsion technologies and energy sources are looking promising. The studies indicate that carbon dioxide emissions from motor vehicles can be reduced by up to 30 percent by using various combinations of existing and emerging technologies.

California's motor vehicle emissions control programs have had tremendous success in the past. The technological hurdles have been challenging, but the industry has met the requirements and continues to provide automobiles that meet not only tailpipe standards, but also requirements for increased durability.

So it's now appropriate to turn our attention to greenhouse gases and use a consistent approach to address these pollutants. The technology forcing elements of the current emissions control programs are critical to the long-term success of motor vehicle emissions controls, and we urge EPA to enable the States to implement this approach by

granting a waiver for the California greenhouse gas program.

California's regulation provides the automotive industry with the flexibility necessary to bring compliant vehicles to market. Manufacturers would achieve compliance through the use of the phase-in periods to reach near and mid-term standards, as well as a vast array of existing and emerging technologies that are expected to be widely available in the next decade. And California covered that earlier.

So to allow the implementation of the California greenhouse gas standards to proceed as expeditiously as possible, we urge the EPA to adhere to the terms of Section 209 of the Clean Air Act and grant California a waiver of Federal preemption. The conditions for granting a waiver have been met. The standards are not arbitrary or capricious. The standards are needed to meet compelling and extraordinary conditions, and the standards are consistent with Section 202 of the Clean Air Act.

EPA's denial of the waiver was flawed in

its conclusion that California failed to show compelling and extraordinary conditions. It's hard for us to imagine a set of circumstances more compelling than those that the States, the Nation, and the world are facing relative to global climate change.

So, once again, we're asking that you grant their waiver and enable California, New York, and a dozen other States to begin to achieve greenhouse gas emission reductions from motor vehicles.

In conclusion, we're very happy that the Obama administration has directed EPA to reconsider its denial of the waiver for the California standards. New York State, the governor is committed to continuing to work with California and EPA to develop and implement the California standards and other strategies needed to reduce the impacts of climate change.

Thank you.

MS. OGE: Thank you for your testimony.

Now we'll hear from Mr. Mark Rupp. Good morning.

MR. RUPP: Good morning. As a Washingtonian, I appreciate that a previous speaker left a Washington product here. It's good product placement for Starbucks.

[Laughter.]

MR. RUPP: Director and members of the panel, thank you so much for holding this hearing today. And many thanks to President Obama and Administrator Jackson for affording us the opportunity to review and reconsider the previous denial of the waiver.

My comments today will supplement earlier comments made by the State of Washington, as well as written comments that we will be submitting within the next month.

It's fitting that I'm sitting here next to my colleague from New York State, as New York and Washington were some of the first States to follow California and its leadership with moving forward with the waiver request.

California's waiver request included a comprehensive set of documents and analysis

establishing that California has met the Section 209(b) Clean Air Act requirements. Washington State has reviewed California's petition and the administrative record made available by EPA respecting California's pending waiver request, and we believe that California has provided a complete analysis and has satisfied all necessary elements to guarantee a waiver approval.

In our judgment, EPA does not have the discretion to deny California's request. Under the facts in the applicable law, as we understand them, EPA must grant California's request for a waiver.

In Washington State, transportation is the largest source of greenhouse gas emissions, accounting for nearly half of our total State greenhouse gas emissions in 2005. A significant portion of these emissions are from light duty trucks and vehicles that would be subject to the California standards.

When fully phased in, California standards will reduce fleet average greenhouse gas emissions in Washington State by nearly 30 percent by 2016. By

2020, California's regulations are estimated to reduce greenhouse gas emissions in Washington by about 5 million metric tons, the equivalent of removing nearly 1 million cars from Washington roads.

Washington State is particularly vulnerable to climate change impacts because of our dependence on snow pack for much of our water supply, as well as electricity. And we have vulnerabilities to anticipated sea level rises.

Anticipated impacts include increased occurrence in severity of forest fires, reduced snow pack, receding glaciers and hydropower loss, declines in summer water supplies and stress on irrigated agriculture, changes in growing seasons and increases in forest and crop pests, increased occurrence in severity of extreme weather events, sea level rise, coastal flooding and erosion, and the list continues.

I might offer that since coming into office in 2005, the governor has issued a number of emergency requests, declarations for disasters based on wind, fire, drought, and flooding. And in fact, in 2007, and again this winter, 2009, we've had two

100-year floods in southwest Washington.

In response to these threats, Washington, through the leadership of my boss, Governor Gregoire, has taken aggressive steps to combat climate change through a host of complementary policies. But California's vehicle greenhouse gas standards are a central pillar in our program to fight climate change through 2050 and go well beyond the limited version of the Federal energy bill.

I urge you to take immediate action to reconsider and approve the California request for a waiver. It will not only benefit California and the many other States like Washington following their lead, it will benefit the entire country by significantly reducing greenhouse gases from motor vehicles.

Thank you very much.

MS. OGE: Thank you. Thank you for your testimony.

Now we'll go with Mr. David Cash. Good morning.

MR. CASH: Good morning. Thank you very

much.

I am David Cash, and I serve as the assistant secretary for policy in the Massachusetts Executive Office of Energy and Environmental Affairs. And I'm testifying on behalf of Governor Deval Patrick. And in addition, our Department of Environmental Protection will be submitting written comments, and these comments will supplement previous comments that have been submitted.

The Commonwealth of Massachusetts applauds the administration's reconsideration of the denial of the California greenhouse gas waiver, and it's an honor to be testifying today on a topic that is at the cutting edge of EPA's climate agenda.

As a State that has had the California low emission standards in place since the early 1990s and as a New England State where five of six States, representing over 95 percent of the car market in New England, are in the Cal-LEV program, we understand the importance of the authority granted to California under the Federal Clean Air Act to regulate vehicle emissions and the importance of the ability of other

States to opt into the California program under Section 177.

These provisions of the Clean Air Act have enabled our States to effectively improve local and regional air quality and public health and, we believe, will allow us to take steps to combat climate change. The program will also allow us to catalyze the growth of a clean vehicle technology sector that will no doubt provide low-carbon transportation solutions to a worldwide and growing market.

We're at a turning point on our path to a clean car future. And while California has certainly been a leader in clean car research and development, New England also has very active university research centers and clean energy companies that are growing even in this economy.

In Massachusetts, there are battery manufacturers, hybrid and new engine R&D companies already producing the batteries used in plug-in hybrid and electric vehicles. Connecticut is advancing fuel cell technology. And Maine, New

Hampshire, and Massachusetts all have a growing advanced biofuels sector.

With these public health, clean energy, and green economy benefits of the Cal-LEV program, Massachusetts fully supports California's request for a waiver. We've consistently been a part of the team of States that have supported California in the legal arena, and we now urge EPA to expeditiously reverse its earlier denial of the waiver and grant a waiver without conditions that can blunt the program's effectiveness.

Implementing the Cal-LEV program is only one of the many tools that will be required to address climate change. Governor Deval Patrick's administration is clearly committed to reducing greenhouse gas emissions and spurring the growth of a clean energy economy. Over the last 2 years, five major pieces of legislation have been passed that will significantly reduce greenhouse gases, unleash energy efficiency, and ramp up renewable energy.

The Global Warming Solutions Act, for example, requires that we reduce our economy-wide

emissions by between 10 and 25 percent by 2020, and 80 percent by 2050. And tomorrow, Massachusetts will be releasing its final regulations adopting the California environmental performance label for vehicles, and these new labels on cars in the showroom will provide consumers with important information on greenhouse gas emissions while making vehicle-purchasing decisions.

However, we know in Massachusetts that we cannot effectively address climate change as one State. And our commitment to actions on climate change has also been demonstrated by the array of regional activities in which Governor Patrick has engaged.

Massachusetts rejoined the Regional Greenhouse Gas Initiative, committing to auction 100 percent of its allowances. We rejoined the New England Governors Conference and have collaborated on a range of energy, climate, and transportation policies. And recently, we have begun, as was stated by the representative from New York, working closely with the RGGI States in a regional process to develop

a low-carbon fuel standard.

Again, building on the work of the California Air Resources Board, the States are working with the Northeast States for Coordinated Air Use Management, NESCAUM -- you'll be hearing from them later -- and are aiming to have a proposal on the desks of the region's governors by the end of this year.

While some of these initiatives are relatively new, it's important to note that there is a long history in which Northeast States have worked in concert in implementing the Cal-LEV program regionally. Some in the automotive industry have stated that there is a patchwork of programs among the States that have adopted the California program. But as the Clean Air Act requires, all the States that have adopted the California program have adopted the exact same emission standards as California.

Second, the States that are already committed to adopting the Cal-LEV greenhouse gas standard are on the order of 35 percent of the total U.S. car market, hardly a niche or patchwork market,

and that will only grow as more States join.

Third, as is detailed in this letter -- which I will be hand delivering -- from our attorney general, Martha Coakley, "The automakers having to comply with two sets of emission standards is far less burdensome than it might first appear," and more evidence for that is detailed in this letter.

And finally, over the past several years, States in the region have expressed a willingness to develop a regional compliance program for the California standards, and we're currently exploring this possibility.

In 2005, when Massachusetts adopted the California greenhouse gas standards, we considered EPA's Tier 2 vehicle emissions program, as well as the CAFE standards, and concluded that the California greenhouse gas standards are more protective than the Federal program. Under Massachusetts law, we are required to adopt California's standards as long as the standards achieve greater emissions reductions than the Federal standards.

Based on studies by the Northeast States

Center for Clean Air Future, NESCCAF, we predict that in Massachusetts, and in New England as a whole, implementation of the California standards will result in the reduction in CO2 emissions by 18 percent in 2020 and 24 percent in 2030 from the regulated vehicle classes, all with proven, existing, cost-effective, off-the-shelf technologies.

In closing, the Commonwealth of Massachusetts is encouraged by EPA's reconsideration of the California waiver for the motor vehicle greenhouse gas standards. As Mary Nichols and Tom Cackette so ably and convincingly argued earlier, as required in Section 209(b), California's request and other States' ability to follow suit is fully consistent with the Clean Air Act. It addresses a compelling environmental problem that requires immediate action and innovation solutions, and it does so more aggressively than current Federal standards.

Finally, it provides States with the tools to reap not only environmental benefits, but the economic development benefits of growing a clean

energy future, but growing it now.

Thank you again for the opportunity to testify today, and we stand poised to assist EPA as you move forward. Thank you.

MS. OGE: Mr. Cash, thank you for your testimony.

Now we will go with Mr. David Littell. Good morning.

MR. LITTELL: Good morning. Thank you for inviting us to testify.

I am David Littell, commissioner of the Maine Department of Environmental Protection. I am testifying on behalf of my State and also on behalf of the eight Northeastern States as part of the NESCAUM group, Northeastern States for Coordinated Air Management.

We are testifying in support of California's waiver request for a waiver from Clean Air Act to enforce their greenhouse gas standards for motor vehicles. The NESCAUM and its member States strongly urge EPA to reverse its ruling of last year in this regard.

As you know, Maine is one of 13 States to exercise its right under Section 177 of the Clean Air Act to adopt the California greenhouse gas standards. That adoption signifies that Maine has a vital State interest in enforcing these greenhouse gas standards as part of Maine's climate action plan.

The greenhouse gas standards are among the 3 top of our 55 measures to reduce greenhouse gases in the State. And both this measure and every time we adopt the California standards, they have to be approved by our legislature. So the determination to adopt faces both by my boss, Governor Baldacci, by my department, but also by our legislature, by overwhelming majorities.

I would also reference the latest Intergovernmental Panel on Climate Change report on climate impacts, adaptation, and vulnerabilities. In fact, we believe that this report and information that's come out since the report was finalized underlies an urgent need to move on climate change.

Many climate scientists believe that the pace of global warming is moving even faster than

some of the IPCC scenarios indicated. As described in a recent Washington Post article, industrial greenhouse gas emissions have increased more quickly than expected, and higher temperatures are triggering self-reinforcing feedback mechanisms in global ecosystems.

The article quoted a member of the United Nations' IPCC who said, "We are basically looking now at future climate that's beyond anything we've considered seriously in climate model simulations."

The impacts of climate change in the Northeast are predicted by multiple models to result in more frequent and more intense storms; more coastal flooding from storm surge, as well as regular floods; reduced revenue from traditional Maine industries, including maple syrup, skiing, and snowmobiling; and increased ecological stress on our fishing grounds, our forests, and our coastal ecosystems and important species, including loons, chickadees, lynx, moose, bobcats, and lobster, all of which are predicted to move farther north with habitat out of the United States into Canada, which

means significantly reduced habitat for all of those species.

We believe the mounting scientific evidence on the impacts of global warming necessitate immediate action to reverse the greenhouse gas emissions trends in every sector, including transportation.

The California program is a crucial linchpin in State and regional efforts to reduce climate change. In order to address greenhouse gas emissions from the region, all the States in the Northeast have either passed legislation or joined as a member of the New England Governors/Eastern Canadian Premiers Climate Pact of 2001 and committed to reductions from a 1990 baseline.

Legislation has been enacted in all of the States, which requires a minimum of a 10 percent reduction from 1990 levels by 2020 and a maximum of 25 percent in reductions beyond 2020.

Approximately 25 percent of the total anthropogenic greenhouse gas emissions in the NESCAUM region come from passenger cars and light duty

trucks. In recognition of this, seven of the eight NESCAUM members have exercised their option under Section 177. And you heard from David Cash those projections. So I won't repeat them.

The standards, importantly, are achievable with automotive technology that exists today. This is not technology forcing. This is technology application.

In 2004, the Northeastern States for a Clean Air Future conducted a comprehensive study, which is part of the record before EPA, to assess the feasibility and costs associated with the introduction of technologies to reduce greenhouse gases from passenger vehicles. That study found cost-effective technologies exist to reduce motor vehicle greenhouse gas emissions by up to 55 percent. It was designed to specifically replicate adoption of the California program in the Northeast.

This 2004 study found that technologies currently in production, such as improved air conditioning, variable valve timing and lift, six-speed automatic transmissions, cylinder deactivation,

can be used to reduce emissions by up to 25 percent. And more advanced technologies can reduce emissions by up to 55 percent. These include gasoline direct injection, hybrid electric, and diesel vehicles.

Importantly, two-thirds of the technologies evaluated in the NESCCAF analysis, which at this point is 4 years old, are already in high-volume production today, meaning production units of half a million or more each year. Examples of vehicles that incorporate these technologies are the GM Tahoe, Suburban, and Silverado with cylinder deactivation; the Honda Accord, Ridgeline, and Fit with variable valve timing; and the turbocharged Volvo S60.

These recent gasoline prices spurred automobile manufacturers to introduce some of these technologies at no additional cost. We know that their incorporation is not just technologically, but economically feasible. More cars, trucks, and SUVs are being planned to include these technologies, and American automobile manufacturers have introduced electric hybrid and plug-in electric hybrid vehicles into their future model lines.

We believe that greenhouse gas standards will provide regulatory certainty, but also reward innovation, successful innovation for manufacturers who introduce these technologies and allow them to remain competitive in the global marketplace.

We applaud the administration on its aggressive recent actions on climate change. The charge delivered to the U.S. Transportation Department to finalize its first phase of light duty motor vehicle economy standards and EPA's reconsideration of this waiver request are extremely positive steps.

So on behalf of the eight Northeastern States and NESCAUM, we urge EPA to expeditiously move and to grant California's waiver request.

Thank you. And I have written testimony that we'll be submitting.

MS. OGE: Great. Thank you.

Ms. Wilson, good morning.

MS. WILSON: Good morning, Director Oge and members of the panel.

My name is Shari Wilson, and I'm the

secretary of the Maryland Department of the Environment, and I'm here today to reiterate Maryland's ongoing and vigorous support for California's request for a waiver.

In the Maryland legislature, there is a practice that rather than repeating what others have said, if you say "me, too," you get extra points. So I'm going to invoke that premise this morning.

We're really here to convey two points. One is that the waiver should be granted in accordance with longstanding practice of the Environmental Protection Agency and the proper interpretation of the Clean Air Act. And the attorney generals from California and New Mexico have ably articulated those reasons, and Maryland supports those.

I did want to take a few minutes to explain how critically important this particular issue is to the State of Maryland. As Commissioner Littell mentioned, the IPCC report reaffirms and stresses the urgency of taking early actions to reduce climate change, and we look forward to the new national

policy on climate change.

But we respectfully submit that even with an aggressive national policy, it will still take State action to accomplish the tall order that has really been given to us by the IPCC. And in Maryland, for example, we have over 3,000 miles of coastline, more than California, I would add. And so, we are a very low-lying State and, depending on how you look at it or evaluate it, the third or fourth most vulnerable State to sea level rise.

In the Chesapeake Bay, we have already experienced over the past century a foot of sea level rise, and we expect to see another similar increase over the next 90 years. It is a critical issue for us, and for these reasons, our legislature has taken the difficult steps of trying to address climate change.

And similar to Maine, in Maryland, our key components of our plan to address climate change are the Regional Greenhouse Gas Initiative, an expanded renewable portfolio standard, an initiative of Governor O'Malley called EmPOWER Maryland, which is

designed to decrease energy consumption in the State 15 percent by 2015, a very ambitious goal, and the Maryland Clean Cars Act, which was passed in 2007.

These are very difficult issues to address, as you know, and our legislature, our State agency, and the citizens of Maryland have moved forward based on our understanding of the interpretation of the Clean Air Act that had been in place for many years. And we are very grateful that you're moving so expeditiously to reconsider this decision, and we urge you to do so.

In Maryland, we are currently considering in our legislature the imposition of a statutory mandate to reduce greenhouse gas emissions 25 percent by 2020. This is in accordance with the IPCC recommendations, and this issue is moving forward because we currently have, with the four initiatives I mentioned, plans that will, once completely implemented, reduce greenhouse gas emissions by over 12 percent. So, in other words, we could be half way to that 25 percent goal.

These plans are contingent on this critical

component of that program, with the Maryland Clean Cars program. So we urge you, as you make your decision, to take into account the very urgent need that we have in the States to be able to advance these programs.

And in concluding, I'd like to repeat some testimony that was given in Maryland to our agency relative to this issue. And the question posed before us was what does it say if we, as policymakers and decision-makers and government officials, don't use the technology that we already have right before us and, in fact, the technology that is clearly in demand by consumers across the country?

So, in conclusion, we urge you to reconsider the decision that was previously made and greatly appreciate the opportunity to share our views with you this morning.

Thank you.

MS. OGE: Thank you.

Any questions for the panel?

[No response.]

MS. OGE: Well, thank you very much. I

know many of you traveled far away to be here. So we appreciate your testimony.

And now we'll go to the next panel, and Karl Simon will be chairing for the remaining of the day.

MR. SIMON: Good morning, Mr. Becker. Why don't we -- welcome to the panel, and why don't we start with you?

MR. BECKER: If the cameras could zoom in on the tie? I'm wearing my car tie today, and I only wear this once every 2 years when we testify for waiver.

So, good morning. My name is Bill Becker. I'm the executive director of NACAA, the National Association of Clean Air Agencies, and we are an association of air pollution control agencies in 53 States and territories and over 165 metropolitan areas across the country. And these comments are going to supplement comments we've made in the past.

Ever since California submitted to EPA its waiver request, NACAA has been strongly supportive of full and prompt approval and believes firmly there is

nothing in the record to support any action but approval. To this day, those who oppose the waiver have been unsuccessful in rebutting the facts provided by California and other supporters of the waiver in their respective testimonies, in written comments, and in other submittals of data and information.

There is no question that the information needed to make the right decision on this request has been made available all along. We're extremely pleased that in the first week of office, President Obama requested the review of the previous administration's decision. We're equally pleased that Administrator Jackson took immediate action in response, and now we look forward to EPA approving the waiver without delay.

Since CARB's adoption of the greenhouse gas regulations, 14 other States -- Arizona, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Washington State. And while Washington, D.C., hasn't been given its statehood yet, the Clean

Air Act refers to Washington, D.C., as a State. So they make 14, in addition to California.

These States have recognized the benefits of these rules and have adopted statutes or regulations that permit enforcement of California's regulations, and you heard the last panel talk about this. And as you also heard, these State programs can't be enforced until and unless EPA grants California's waiver. And thus, EPA's previous denial of California's request vitiates the rights of these States to protect public health and welfare.

While there have been a number of issues raised by opponents in recent weeks contesting the waiver, and these, you'll hear later today, range from an alleged patchwork quilt approach, technological infeasibility, affordability, and many other factors, the fact remains that these issues merely cloud the decision that is before EPA today.

The decision before EPA is whether or not California has satisfied three specific criteria under Section 209(b) of the Clean Air Act. It has nothing to do with the resolution of these other

issues. Not unimportant, but has nothing to do with the resolution of these other issues.

EPA's role in granting a waiver to California on a particular motor vehicle emission rule, such as this, is narrow and deferential. EPA is not permitted to substitute its judgment for that of CARB as to whether a standard is too technically challenging or too expensive. EPA may not base its decision on statutes other than the Clean Air Act or other policy considerations, including NHTSA.

Rather, EPA must grant California's request for a waiver unless the agency can demonstrate that the three conditions are not met. There is that presumption that Mary Nichols referred to.

The first condition is, as we heard earlier, EPA must grant the waiver unless it could be shown by clear and convincing evidence that CARB acted in an arbitrary and capricious manner when it determined that the addition of the greenhouse gas regulations did not render California's mobile source program considered as a whole less protective than the Federal program.

Here, it's difficult to imagine how regulating greenhouse gas emissions, where the Federal program does not contain any parallel regulations, does anything other than make the California program even more stringent than it was before those regulations were adopted.

Second, EPA must grant the waiver unless it determines that California no longer needs to maintain an independent motor vehicle emissions program. Under prior precedent, the issue is not whether California needs a particular standard or whether any particular standard will significantly contribute to resolving an identified problem unique to California. EPA determined as recently as December 2006 that with respect to a separate waiver request, there were compelling and extraordinary conditions warranting a continuing California emissions program.

As you heard from speakers in the first panel and as you'll hear from speakers later on today, the results of recent research further substantiate the compelling and extraordinary

conditions in California. And with all due respect to Senator Levin, the issue in California is not whether their problems are unique. That is not a condition in the Clean Air Act.

The condition in the Clean Air Act is whether these are compelling and extraordinary conditions. And as you'll hear later from Stanford University professor Mark Jacobson, in a recent study, he found, "Carbon dioxide-induced global warming increases air pollution health problems more in California per capita than it does in the U.S. as a whole."

And "controlling dioxide from California will reduce the air pollution-related death and illness rate in California at a rate 2.5 times faster than it will reduce the death rate of the U.S. as a whole."

And finally, "Local carbon dioxide emissions from vehicles in California causally increase local air pollution and health problems in California." And while that's not a condition of granting the waiver, the fact is this separates

California from the rest of the country in terms of not only compelling and extraordinary, but it, indeed, addresses its unique problem.

And there was another recent study, subsequent to the denial of the waiver, by Diffenbaugh, who referred to -- who concluded that there are climate change hot spots in the continental U.S. found over California and even western Texas. And Mary Nichols referred to that.

The third criterion that EPA must address in granting a waiver is whether or not it determines that California's program is not consistent with the requirements of 202(a) of the act. And as Tom Cackette mentioned in his testimony, since California's program contains the same limitations as found in 202(a), the required consistency is established.

So let me just conclude by saying California's regulations and its request for a waiver were in 2005, when the State requested the waiver, in 2007, when EPA took public comment on the request, and in 2008, when EPA denied the request, clearly in

the public interest.

And today, in March 2009, these rules not only remain in the best interest of the public, but also begin the process of demonstrating that this country can address global warming and, at the same time, create jobs, enhance energy security, reduce our dependence on foreign oil, and save money for the consumer.

The rules further provide a number of innovations that will allow California and the 14 States that have elected to opt into the requirements to continue to serve as a laboratory for development of national programs, consistent with the intent of Congress as expressed in the Clean Air Act.

And finally, for those who believe that there remain implementation problems associated with a waiver, our recommendation is do not contest the waiver. Work with us to approve the waiver, and to the extent that you can make a convincing argument to California and other States that there are, indeed, serious implementation issues that are undermining the industry's economy and survival, we will address

those.

Thank you.

MR. SIMON: Thank you, Mr. Becker.

Ms. Coralie Cooper, please. Thank you.

MS. COOPER: Thank you.

Good morning. My name is Coralie Cooper, and I'm here today, along with Commissioner Littell, representing the Northeast States for Coordinated Air Use Management, or NESCAUM.

NESCAUM is an association of State air quality agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, Rhode Island, New York, and Vermont. NESCAUM, on behalf of its member States, testifies today in strong support of California's waiver submittal.

This submittal provides a solid demonstration that California's greenhouse gas emission standards meet relevant waiver criteria, and accordingly, we ask EPA to expeditiously reconsider and approve the California waiver request. We applaud the administration and the agency for reconsidering the waiver denial.

The Northeast States have over 15 years' experience in implementing the California motor vehicle standards. Recently, members of industry have raised issues, as Bill Becker noted, that they say are impediments to implementing the program and have alleged that program compliance is very difficult. And they have used these issues as arguments against the waiver.

But I would say that during the many years of complying with the California program in the Northeast, manufacturers have met the program requirements without any violations and have also met the needs of Northeast consumers at the same time.

Moreover, States in the region have had an ongoing dialogue with industry about issues of concern, and we continue to do so, recently, as I believe David Cash mentioned, with regard to regional compliance. We expect to continue to work together to find solutions, and our real world experience for over 15 years directly contradicts claims that the program is onerous.

As EPA stated in its endangerment analysis,

"Warming of the climate system is now unequivocal as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level."

The IPCC has concluded that if we are to stabilize the Earth's climate at a 2 to 2.4 C global average temperature increase over today's average temperature, we're faced with a need to reduce 80 percent of greenhouse gas emissions by 2050.

Deep reductions will need to be made across all sectors to meet these goals. These reductions must be achieved from today's emissions levels and must be over and above increases that result from growth in vehicle fleets and miles traveled.

Given the enormity of this task, we cannot afford to leave on the table any potentially available greenhouse gas reductions. And as was noted by previous panel members, seven of the eight NESCAUM States have exercised their option under Section 177 of the Clean Air Act to adopt the California motor vehicle greenhouse gas standards.

And also, as mentioned by Commissioner Littell -- oh, the standards represent near-term and substantial reductions in motor vehicle greenhouse gases. And as Commissioner Littell noted, NESCAUM's sister organization, NESCCAF, which stands for Northeast States Center for Clean Air Future, conducted a comprehensive study in 2004 to assess the feasibility and costs associated with the introduction of technologies to reduce greenhouse gases from passenger cars.

And the study formed an important part of the California technical assessment for the greenhouse gas standards. Others have noted the reductions that were found in the NESCCAF study. So I won't repeat those, but I'll just continue to say that recent announcements by automobile manufacturers underscore the fact that the technologies needed to meet the greenhouse gas standards are here today.

For example, in 2007, Renault announced that it would introduce start-stop technology, which reduces engine idling in all of its European models, between 2009 and 2010. Already available today are

models with cylinder deactivation, which allows the engine to run on fewer cylinders at times when less power is needed, and two other approaches also noted previously, variable valve timing and turbocharging and downsizing, allow engine operating characteristics to more closely match the power needed at any given time.

And California provided examples and photographs of models that include these technologies that are on the market today. These are just a few examples, and there are many others.

The recent high gasoline prices and associated high cost of operating vehicles has spurred manufacturers to introduce some of these technologies at no additional cost to consumers, and this demonstrates that the California greenhouse gas standards are technically feasible and, in fact, will result in the types of cars and technologies that the American consumer wants.

In addition, a number of companies, including GM, Ford, Nissan, Toyota, and Chrysler, have announced the production of advanced technology

vehicles that achieve much greater reductions in greenhouse gases than the technologies noted above. For example, manufacturers have announced plans to introduce battery electric and plug-in hybrid vehicles in the 2010 timeframe.

In closing, we commend EPA for its reconsideration of the denial of the California waiver request. We are now hopeful that a positive decision will be forthcoming from EPA, and we stand ready to assist the agency in its efforts to take action to approve the waiver.

Thank you.

MR. SIMON: Thank you very much for both of your testimonies.

Any questions?

[No response.]

MR. SIMON: Again, we appreciate you all coming out to talk to us, and thank you very much.

Why don't we call up the next panel? Julie Becker, Mike Stanton, John McEleney, Eric Fedewa, Adam Lee, and Damon Lester.

And I will note, while we're gathering

here, for the record that Robert Doyle, an attorney at EPA in the Office of Transportation and Air Quality, is joining the panel.

I can assure you this wasn't a purposeful test to check your organizational skills, but you passed. Yes, thank you.

Ms. Becker, why don't we start with you?

MS. BECKER: Good morning.

My name is Julie Becker, and I'm vice president for environmental affairs of the Alliance of Automobile Manufacturers.

The alliance is an association of 11 vehicle manufacturers, including BMW Group, Chrysler, Ford, General Motors, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, and Volkswagen. The comments that I present today will be supplemental to our prior testimony and written comments.

The alliance and its members are committed to developing and implementing policies that enable the introduction of new technologies needed to support sustainable mobility. We believe the best

way to achieve this is to initiate and leverage consensus-oriented dialogue with industry, Federal and State governments, and other stakeholders to address shared objectives, both domestically and internationally.

We also believe that the Federal Government should establish and administer a single national program for regulation of vehicle greenhouse gas emissions and fuel economy. Such a program can bridge the interests of all stakeholders, including the States and the motor vehicle manufacturers who are involved in the difficult challenges related to greenhouse gas emissions. If such a program is established, granting the waiver will be unnecessary.

The alliance members are committed to continuously improving fuel economy and thereby reducing greenhouse gas emissions. In fact, the motor vehicle industry has done more to reduce greenhouse gas emissions than any other sector of the U.S. economy.

For example, the Federal fuel economy standards have required, since 1975, manufacturers

reduce an estimated 11 billion metric tons of CO2 that otherwise would have been emitted. Our demonstration of this commitment continued with our support of the 2007 Energy Independence and Security Act, a landmark bill advocated by both Speaker Pelosi and Senator Feinstein.

EISA requires automakers to reduce CO2 from vehicles by at least 30 percent by model year 2020. In fact, for model years 2011 through 2015, the standards proposed by NHTSA last spring to implement EISA would save 18 billion gallons of fuel and avoid 178 billion metric tons of tailpipe CO2 emissions over the lifetime of the vehicles.

Already, as many speakers have pointed out today, the auto industry is transforming itself and reinventing the automobile. Automakers have made major investments into developing new fuel-efficient technologies, and the results are now coming to the dealer showrooms.

More than 50 technologies offered in vehicles on sale today reduce emissions, increase mileage, and allow vehicles to run on cleaner fuels.

Today, consumers can buy more than 130 models that achieve 30 miles per gallon or better on the highway, according to EPA's own statistics. And they can choose from more than 27 models of hybrids and 8 models of clean diesel automobiles.

But the challenges are here for the auto industry. With the U.S. and global economy in a severe recession, this is the worst market for us since World War II. We have credit unavailability, financial collapse, a lack of consumer confidence. And U.S. sales dropped in just 2 years from 16 million units to 10 million units.`

Analysts are forecasting that 2009 will be even worse and that it will take years for this industry to recover. The dramatic market downturn has had a devastating impact on the financial health of all automakers, U.S. domestic and international firms.

With regard to the waiver reconsideration, it is important to realize that the CAFE program and the California program have different standards, different provisions, different timelines. By

creating unnecessary complexity, these differences will raise the cost to consumers and ultimately have the unintended consequence of slowing down the introduction of advanced technologies to market.

One of the most significant challenges that would be posed by the grant of the waiver is the requirement for manufacturers to comply with greenhouse gas regulations on a State-by-State basis. This problem is explained in detail in the National Automobile Dealer Association's "Patchwork Proven" report.

At a time when manufacturers are shedding jobs and consolidating resources, a waiver would require each manufacturer, subject to the California fuel economy standards, to develop and implement more than a dozen different compliance plans.

In closing, the time has come to bridge State and Federal concerns and move all stakeholders forward. The alliance believes that any effective, efficient program to address climate change must be built on a single, strong, national framework administered by the Federal Government.

This framework should acknowledge the specific product and sales structures of individual manufacturer's fleets and be designed in a way that challenges all manufacturers fairly by including appropriate implementation and compliance flexibilities without affecting overall greenhouse gas reductions.

To this end, we encourage EPA to work closely with all stakeholders, including NHTSA and CARB, to develop a single national program for vehicle fuel economy and greenhouse gas emissions administered by the Federal Government. The alliance and its member companies stand ready to work with EPA and other stakeholders to achieve that goal.

Thank you for the opportunity to testify today. We do plan to submit written comments on specific aspects of California's request for reconsideration. I'll be glad to take any questions.

MR. SIMON: Thank you, Ms. Becker, and we look forward to your written comments.

Why don't we hear next from Mr. Stanton? Thank you.

MR. STANTON: Thank you, Karl.

I am Mike Stanton, president and CEO of AIAM, a trade association representing 13 international manufacturers and suppliers. We welcome the opportunity to testify today and see this proceeding as an opportunity to develop a national program.

And this statement today does supplement our earlier submissions, and we will also supply written records, written comments for the records.

In our view, the overriding issue that must be addressed now is how the necessary emission reductions can most efficiently and effectively be achieved. We strongly believe that a single national program to regulate greenhouse gas emissions from motor vehicles is the only sensible approach.

EPA, DOT, California, and other States have important complementary roles to play in this national program. The proceeding provides EPA with a unique opportunity to take the necessary steps towards achieving that program.

However, we are concerned that a move by

EPA to grant unconditionally the waiver would undermine the opportunity to achieve a national policy. Such a grant would result in a patchwork of regulatory programs, all with the same fundamental purpose, but each having differing, potentially conflicting levels of stringency and administrative requirements.

And these programs include the California greenhouse gas standards program in California, programs adopted by other Section 177 States that present compliance issues unique to each State, the possibility of separate greenhouse gas standard program proposed by EPA, and then regulations to be issued by the Department of Transportation will set aggressive CAFE standards at the maximum feasible level for each model year through 2030, which, as EPA noted in its technical support document for its greenhouse gas ANPRM, is closely related to vehicle CO2 emissions.

In addition, the CARB and DOT CAFE programs have significant structural differences. We are concerned about the substantial and unnecessary

inefficiencies that result from differing Federal and State programs. As long as the Federal Government is taking a unified aggressive action, varying State requirements would impose immense costs and provide little or no environmental benefit.

There are many important policy considerations that support our call for a single national program, and these policy considerations are closely tied to the factors that EPA must apply when reaching its decision on reconsideration.

First, are there any significant environmental or energy security needs that can be met only through multiple standards? We believe the answer to that is no.

Second, the principal policy justifications for separate California standards are, one, the need to address extraordinary local air quality concerns and, two, the so-called laboratory effect of limited-scale testing of new emission control technology in the California market.

With regard to the first issue, California greenhouse gas standards cannot significantly affect

local ambient concentrations of carbon dioxide. EPA's ANPRM technical support document and DOT's CAFE environmental impact statement demonstrate how limited this effect is. With regard to the laboratory issue, we believe the effect would be lost as other States adopt the California program.

This administration has the extraordinary opportunity of having future DOT CAFE, EPA, and California standards under consideration at the same time. This provides an opportunity to bring these three competing programs together.

There are practical concerns that would be raised by an unconditional grant of the waiver. For example, California officials have expressed their intention to make their standards take effect 45 days after the granting of the waiver for the 2009 model year. The 2009 model year is now nearly complete, and some 2010s are already in production.

And the California program was designed, as a whole, with the potential to earn credits in the early years offsetting steep increases in the later years. To now deny manufacturers this intended lead

time to earn credits by retroactively granting the waiver could add an additional compliance burden.

And I want to close by observing that California and the other States have played a very important role in promoting the need for greenhouse gas standards at a time when there was no Federal standards. Unfortunately, aggressive fuel economy standards -- or excuse me, fortunately, aggressive fuel economy standards can serve as a surrogate for automobile greenhouse gas standards until such time as EPA promulgates its own standards.

But this is a very fluid regulatory environment, and what EPA does now could have implications for many years to come. There are many complementary steps the States can take within the context of a national program, and this is the way it should be -- a national systematic approach to a national and international problem.

Thank you.

MR. SIMON: Thank you, Mr. Stanton.

Why don't we hear from Mr. McEleney, please?

MR. MCELENEY: Thank you, Mr. Simon. Appreciate the opportunity to be here.

My name is John McEleney. I'm a new vehicle dealer in Clinton, Iowa, and I'm chairman of the National Automobile Dealers Association.

This testimony will supplement written information we've provided in the past, and we'll also provide some additional written data to support these comments.

As chairman of the National Automobile Dealers Association, I'm pleased to present testimony today on EPA's reconsideration of its denial of a preemption waiver for California's motor vehicle greenhouse gas rules.

NADA represents over 19,000 franchised automobile and truck dealers who sell new and used motor vehicles, engage in service repair and part sales. We represent about 92 percent of all the dealers of all brands in the United States. Collectively, we employ about 1 million people. And as I said, I'm president of McEleney Auto Center, two dealerships in eastern Iowa.

Today, I'd like to make just three main points. First, good public policy demands a single national fuel economy greenhouse gas standard. Two, the retail automobile industry's dire financial straits make the need for a single national standard even more compelling. And three, CARB's patchwork approach is fraught with inherent flaws.

Logic and common sense dictate that EPA conclude this proceeding reaching the same conclusion it did a year ago, that only a single, well-designed national standard can enhance new vehicle fuel economy, emissions performance, and safety. Last year's decision was based on truths that still exist today. Nothing has changed.

The Energy Independence and Security Act of 2007 set a very ambitious fuel economy goal for cars and light trucks, equating to an increase in the standard of at least 40 percent, with commensurate decreases in greenhouse gases. EISA also requires an attribute-based approach that encourages manufacturers to improve the fuel economy for each light duty model segment they sell, thus allowing

them to be more responsive to customer buying preferences.

Finally, under EISA, manufacturers are free to meet their fuel economy mandates by adjusting the number and types of vehicles they sell across the entire country, providing further flexibility to meet consumer demand. These are critical provisions for any fuel economy, greenhouse gas regulatory scheme as benefits can be achieved only if and only when new vehicles are sold to end-users.

By way of contrast, a State-by-State patchwork approach would result in CARB State dealers having their lots filled with unsold vehicles. First, the CARB approach relies on a flat standard that fails to afford manufacturers the same flexibility to meet consumer demand that they would have on an attribute-based approach.

Second, the lack of flexibility inherent in a flat standard would be amplified by a patchwork regime requiring manufacturers to deliver to dealers separate and unique fleets in each CARB State. This patchwork results because consumers buy different

vehicles in different quantities in different States.

As an automobile dealer, I can tell you people in Iowa, their demand is different than what people buy in California. Simply put, the CARB approach would force manufacturers to deliver vehicles to dealers that customers may not want and to ration the vehicles they would want.

Note, however, that while dealer inventories would be constrained under a CARB regime, consumer choice would not be, and that is because of cross-border sales loophole. Remember, compliance is measured by what manufacturers deliver for sale to dealers, not by what consumers actually buy or lease.

Consumers unable to obtain new vehicles of choice from inventory-constrained CARB State dealers would be free to purchase those vehicles from out-of-State dealers. The bottom line, in-State dealers lose sales, and the CARB State loses any environmental benefit.

Alternatively, consumers facing a CARB-constrained mix at the dealership may elect to buy a CARB-exempted brand, to purchase a late model used

vehicle, or to defer their purchase altogether. Again, to the extent consumers choose one of these items, little, if any, greenhouse gas and fuel economy benefit would be achieved.

A national program that accounts for and leverages consumer preferences would avoid perverse interstate sales distortions. A national program would also ensure that sought-after greenhouse gas and fuel economy benefits are fully realized.

Earlier, I said nothing has changed since EPA correctly denied CARB's waiver request. Actually, a great deal has changed.

Since last March, the country has plunged into an economic recession, and the companies that build and sell new motor vehicles have suffered dire impacts. This time last year, new vehicles were being sold in this country at an annualized rate of 15 million. Now that rate has dropped to less than 10 million units. Almost 1,000 dealers went out of business last year, and many more were losing money.

Please understand that because dealers buy the vehicles we hold in inventory, typically through

expensive inventory financing arrangements, we take the direct economic hit if consumers fail to buy or lease them. Any rule designed to reduce greenhouse gases or to increase fuel economy must account for customer needs and purchasing behaviors.

To achieve policy success, consumer demand must be recognized and leveraged. Policies that attempt to force the manufacture and sale of new vehicles that customers are reluctant to buy will ultimately fail. Given the serious economic situation we currently face, we cannot afford to pursue policies that are as market-resistant as CARB's.

Any State-by-State patchwork approach to regulating fuel economy and greenhouse gases, by definition, can't succeed. Moreover, the program CARB has adopted is rife with additional flaws. These are outlined in a report, entitled "Patchwork Proven," copies which we will leave with you today.

Giving little or no consideration to real occupant safety concerns is one of the flaws. Unlike EISA's attribute-based scheme, CARB's rules undermine

safety by incentivizing a vehicle downsizing. Second, giving no consideration of economic conditions or impacts outside of California and, third, exempting many vehicle manufacturers until model year 2016.

To conclude, unless and until new vehicles are sold, greenhouse gas and fuel economy benefits cannot be realized. A well-designed national program can effectively leverage consumer demand to help achieve real world improvements. A State-by-State patchwork approach, due to its inherent structure, cannot.

The CARB approach reflects numerous poor policy choices. Especially in light of the severe challenges faced in the auto sector, California's waiver request should be denied in favor of a strong, single national fuel economy greenhouse gas standard.

Thank you for allowing me to be here, and welcome any questions you might have.

MR. SIMON: Thank you, Mr. McEleney, for your testimony.

I'd like to hear next from Mr. Lester,

please.

MR. LESTER: Thank you, Mr. Simon.

My name is Damon Lester, and I'm the president of the National Association Minority Automobile Dealers, or NAMAD for short. NAMAD represents over 1,800 ethnic minority automobile dealers, which represent less than 5 percent of the overall automobile dealer network in the United States.

As you know, the state of the entire automobile industry is facing unprecedented challenges and the lack of available credit for consumers to purchase vehicles, the lack of available credit for automobile dealers to access working capital and floor plan loans, and the continuing push for automobile manufacturers to build and bring to market more fuel-efficient vehicles.

As this economic turmoil that we are facing has resulted in the loss of over 900 dealerships, of which 200 were owned by ethnic minority dealers, in 2008, this year seems to have worsened as automobile sales have hit an all-time low, while we estimate

that over 300 ethnic minority dealerships will close their doors by year end, which equates to over 20,000 direct and indirect jobs.

While NAMAD supports the need for fuel-efficient vehicles, we also support our dealerships who have either converted their facilities to become more energy efficient, as well as those who plan on building new energy-efficient buildings.

I'm here to talk about the effects the California waiver will have on automobile dealerships, particularly minority-owned dealerships, which will be disproportionately affected if the California waiver decision is reversed.

Ethnic minority automobile dealers will bear the brunt of this regulation because of the product mix that our dealers will have to sell in many cases may not be the vehicle mix that consumers may want, as minority automobile dealers tend to be affected first whenever there is a shift or change in the industry.

Under CARB's regulation, compliance is based on automakers achieving a certain fleet-wide

greenhouse gas average for the vehicles they deliver for sale in each California State. Generally speaking, to comply, automakers will be forced to deliver for sale a fleet where small vehicles offset large vehicles to meet CARB's fleet average.

Once an automaker delivers for sale the right fleet mix in each California State, their regulatory obligation is fulfilled, but the problems for the dealers are just beginning. The problem with CARB's approach is that it ignores consumer demand.

For example, what if consumers in a CARB State prefer an automaker's large vehicles over its small vehicles? What if consumers did not buy the mix of vehicles CARB's regulation requires? The only realistic way automakers can guarantee compliance is to ration the amount of large vehicles delivered to a State or increase the amount of small cars that are delivered.

This hurts dealers in two ways. First, dealers will lose sales if automakers have to ration delivery of large vehicles in CARB States to meet the fleet average. And second, if dealers are forced to

take delivery of more small cars their customers don't want, dealers will be stuck paying the interest charges while these vehicles sit on their lots. And this is what's going on with our dealers today, as they're faced with their floor plan loan curtailments.

In reality, the only thing CARB's regulation will achieve is the sale of more small vehicles in the California States and less large vehicles because that's all automakers need to do to comply.

Thankfully, more fuel-efficient cars are coming to the California States due to the new CAFE standards Congress enacted in 2007. Under CAFE, automakers are required to build more fuel-efficient vehicles for sale nationwide. Unlike CARB's regulations, where in America these vehicles are sold is irrelevant for compliance purposes.

CARB's regulation also contains provisions contrary to its goal of reducing greenhouse gases. For example, CARB's regulation exempts over a dozen global automakers until 2016.

Remarkably, CARB's regulation also exempts Hummer from regulation and automakers from China and India, who are also trying to bring to market their vehicles in the United States. So we could be faced with the situation where EPA allows California to exempt a Hummer franchise from its own greenhouse gas regulation, all in the name of combating global warming.

As minority dealers recognize that fuel economy standards in this country must increase for the health of our planet and for our own energy security, a single national economy standard gives automakers the stability, efficiency, and certainty they need to produce the fuel-efficient cars of tomorrow. It allows minority auto dealers to sell and service the vehicles our customers actually want and not what California regulators want us to drive.

In comparison, CARB's patchwork regimen would only exacerbate the economic turmoil in the auto sector. As the California waiver is reconsidered, America's minority auto dealers urge the Obama administration to maintain a single

national economy standard.

Thank you.

MR. SIMON: Thank you, Mr. Lester. Appreciate your testimony.

Mr. Lee, welcome back, and you have the microphone.

MR. LEE: Thank you very much.

My name is Adam Lee. I want to thank the EPA for allowing me to testify today.

I'm the president of Lee Auto Malls, located throughout Maine. Our company was founded in 1936 by my grandfather with three used cars and $1,500 that he borrowed. Soon thereafter, he got a Chrysler dealership. We have been Chrysler dealers for over 70 years.

I grew up riding in Chryslers, selling Chryslers. Chryslers have put me through school. So they are near and dear to my heart.

We currently have two Chrysler/Dodge/Jeep dealerships, GMC and Cadillac dealership, as well as Nissan, Honda, and Toyota, and six used cars throughout Maine. Since 2001, we have been the

largest hybrid dealer in the State. We are also the largest Dodge truck and Jeep dealer.

I am here today because I am worried. I'm worried about the air my children breathe, the water they drink, and because I've watched our industry go from the top of the heap to impending bankruptcy in less than 25 years.

Last year, GM lost $30.9 billion and is burning through cash at an astounding rate. I know there are many reasons for this beyond lagging in product. However, product is still important. As gas prices have climbed, consumers have abandoned gas guzzlers and flocked to clean, efficient cars.

Meanwhile, the entire industry got caught again with the wrong inventory. In an effort to clean out their bloated inventories and ours, the manufacturers do what they can, which is increase rebates, lower interest rates to zero percent, and give dealers giant incentives to sell trucks and SUVs that people don't want to buy.

Here is the end result. According to a recent J.D. Power study that was released comparing

'08 net profits to '07, just a 1-year timeframe, the industry pretty much broke even on compact cars. We're down around $1 billion on mid-sized cars, which isn't bad.

On SUVs, they were down $21 billion in net profit in the 1 year, with sales down 38 percent. On trucks, their profits were down $22 billion. This is in a year. Whatever plan they may have is not working.

I've watched our industry try and convince you and the rest of the world that leaded gas is not bad for you. Lead is poison.

I've watched them claim seatbelts were unnecessary. Seatbelts save lives. I've watched them say airbags really don't save lives. Airbags save lives.

I've watched them claim that consumers won't buy cars that get good gas mileage. They will. I've watched them fight every single safety, environmental, and efficiency advance, claiming they were too expensive, unsafe, or unnecessary. And the list goes on.

My industry has no credibility. They have failed me, its customers, and the thousands of car dealers across this country who have staked their entire fortunes and futures on them. Everything I have is tied up in a dealership.

Today, they are exaggerating again. They use an unsafe car argument, which is very frustrating since they build the cars. I don't know how they can sit here and tell us they're unsafe. They're safe. NHTSA determines that they're safe. They won't let them go on the road if they're not.

And patchwork, it's a big argument. The one thing I'd say is if they truly believe that's the problem, but they support cleaner air, why don't they propose averaging all of the clean car States together as one entity? Maybe they'd get behind it then.

I'm not a scientist or a lobbyist, nor am I any particular type of expert on anything special. However, since I was old enough to walk, I've been around cars and car dealerships. A large part of running a successful car dealership is getting a feel

for what people will and won't buy.

I am here today to tell you that my customers want cleaner cars. I get asked every single day, "Why can't I buy a hybrid minivan, or why can't I get a clean hybrid diesel Jeep Grand Cherokee?" And what I'd ask you is why wouldn't you want a cleaner car? Why wouldn't you want a car that's better on gas?

Toyota is making cleaner cars, but they're fighting against this waiver. Ford of Europe makes some of the greatest, cleanest diesels you've ever seen. But they're fighting our efforts to have cleaner cars in Maine and the rest of the Nation.

And Chrysler and GM are using our taxpayers' money to pay their lawyers to fight against cleaner cars in Maine and the rest of the country. We need this waiver now to protect our States and to force the auto industry to continue producing cleaner and cleaner cars.

The technology exists now to improve our fleet. Ask Toyota. Ask Ford. There is technology out there right now that can improve our fuel

economy. They've been mentioned by other speakers. I won't list it.

And there are surprises we cannot anticipate. Who knows who Tony Fadell is? Who could have guessed that, in 2001, he'd invent the iPod with Apple?

Who could have anticipated the BlackBerry, now only 10 years old? Anybody have a BlackBerry in this audience?

Who could have guessed that someone would make a car that runs on gas and electricity that gets 50 miles per gallon? Toyota.

There is never a good time to do something new. There is never a good time to go on a diet, to quit smoking, to start working out, or to start redesigning your cars.

It would be better if this were 7 years ago, when everyone was making lots of money, and we were asking them to revamp or start making cleaner cars. Or 10 years ago or 25 years ago, when Detroit three were on top and had all sorts of money.

But it's not. Detroit has been very

successful at fighting any improvements to CAFE and emission standards. So here we are. It's the worst of times, but we're talking about our health, our air, global warming, and global competitiveness.

According to the International Council on Clean Transportation, the countries of Canada, Australia, China, Japan, continent of Europe get anywhere from 7 to 25 miles per gallon better than the American passenger fleet does right now. China, for goodness sakes, is beating us.

Where do you suppose they're getting all these cars from, outer space? No.` From GM, Ford, Chrysler, Toyota, Nissan, Honda, to name a few. They exist now.

Grant this waiver. Challenge Detroit. Challenge Japan and Korea. Challenge Europe. They will rise to the challenge. They always have. They'll surprise us. They can do it, but they need to be pushed. Push them now.

Thank you.

MR. SIMON: Thank you, Mr. Lee. Appreciate your testimony.

Mr. Fedewa, please? Hopefully, I got that right.

MR. FEDEWA: I have a short presentation prepared to go along with my testimony, if we could bring that up on the screen?

Or maybe not? I hope you'll excuse me.

Okay. Good morning. My name is Eric Fedewa. I am vice president of global powertrain forecasting for CSM Worldwide. And I'd like to thank the panel for the opportunity to offer testimony today.

CSM is a privately owned global company. We are a totally independent, objective provider of forecasting services to 85 percent of the world's automakers and suppliers. We know the OEM. We know their cycle plans. We know what they're capable of today and what they're planning for the future and how much they can stretch to get there.

This includes gauging the impact of fuel economy emissions policies, such as California's waiver request, AB 1493. The presentation today will give us some insight and -- the testimony today will

give us some insight on some of the dynamics behind what happens in the industry and how some of our products get to the market.

There is no question for us that improving fuel economy and curbing CO2 is in the national interest. But our analysts suggest that allowing California to regulate CO2 emissions and, thus, fuel economy will further damage companies that are struggling, like GM, Ford, and Chrysler, and much of their supply base and potentially destabilizing relatively healthy companies, like Toyota and Nissan.

We also are concerned that granting the waiver will create, to borrow a phrase from the National Automobile Dealers Association, a patchwork of regulations that will require unique compliance strategies or technology strategies for each State that follows California's lead.

The impact of granting the waiver request will be far reaching. Overall, we believe vehicle sales will be reduced. We believe the product mix will shift to less profitable and even loss-making vehicle lines, and I'll explain more about that in a

later part of the testimony. Consumer choice will be frustrated, and compliance costs and complexity will increase dramatically for the product.

This will put billions of taxpayer dollars already invested in the automotive industry at even greater risk for what the Congressional Research Service concludes is a modest 2.5 to 3 percent impact on CO2 emissions nationally, or a negligible 0.6 percent impact on global CO2 emissions.

For all of these reasons, we believe that setting the single national standard for fuel economy and CO2 emissions and aligning other policies to create a robust and stable market for fuel-efficient vehicles are certainly in the national interest.

As the panel knows, automakers already have committed to a 40 percent increase in fuel economy by 2020 to an average of 35 miles per gallon. For the initial phase from 2011 to 2015, the Department of Transportation says CAFE will reduce CO2 emissions by 521 million metric tons over the lifetime of those vehicles sold during those model years.

The American Council for Energy Efficient

Economy, for its part, estimates that the standards will reduce CO2 emissions by 47 million metric tons annually by 2020 and 404 million metric tons annually by 2030.

At CSM, we estimate that by 2020, U.S. vehicles will be equal to today's European and Japanese fleets in terms of fuel economy and greenhouse gas emissions, which is a major accomplishment, especially given the significant differences in driving habits, fuel prices, and consumer preferences that exist in the U.S.

It is important for the committee and the public to understand that delivering these improvements will be staggeringly expensive to the manufacturers. Many of those costs will be passed on to consumers.

Today, we estimate annual R&D spending for the U.S. auto industry is about 16 billion U.S. dollars, which roughly equals the R&D spending the Pentagon funnels through the defense industry. An increasing percentage of that money is being spent on fuel economy and emissions technology.

For example, Ford told the U.S. Department of Energy that it plans to invest $14 billion over 7 years to produce fuel-efficient vehicles. So we have some really major investment happening in fuel efficiency already.

Every element of the vehicle is being scrutinized. Since only about 15 percent of the energy from the gas tank actually gets used to move the vehicle down the road, this has yielded relatively affordable fuel-saving technologies like gasoline direct injection engines, advanced six-speed transmissions. It has also led to the development of clean diesel and hybrid technologies, which can add $2,000 to $3,000 or more in piece cost per vehicle.

In 2006, the Energy Information Administration estimated that the increased adoption of these technologies would sharply increase the average price of a new car in 2016. Adjusted to today's dollars, the figure is $2,176, and we believe the final figure may end up much higher.

To comply with AB 1493, manufacturers will need to ship more of these higher-cost vehicles to

California and other green States. And based on published reports and testimony by manufacturers, including Ford and Chrysler, the availability of larger vehicles will likely be restricted.

From the standpoint of viability, this is no small matter as the States that plan -- sorry about that -- as the States that plan to adopt AB 1493 account for half of the domestic vehicle market. Consider that last year the Ford F Series pickup line was the best-selling vehicle in the U.S. The Chevrolet Silverado pickup was number two, and the Dodge Ram was number nine. Combined, sales of these vehicles were more than 1.2 million units.

Based on manufacturers' data, we estimated the variable profit per unit of a full-sized light duty pickup to be about 5,000 U.S. dollars. So we're talking about a total of $6 billion that is available to fund capital investment, pay salaries, overhead, and especially fund debt repayment.

Therefore, even a 10 percent reduction in pickup truck sales has the potential cost of more than half a billion dollars in a below-trend 13.1

million unit sales market. An increase in the sales of more fuel-efficient vehicles will offset this somewhat, but these vehicles have significantly lower contribution margins.

For example, we believe the C-segment cars, like the Ford Focus, carry margins well below $1,000 per unit. And on a fully accounted basis, we believe that many small and mid-sized cars and full hybrids lose money even at higher industry volumes than we see today.

In the case of Ford Motor Company, we expect a double-digit sales decline, and its current sales mix of 70 percent trucks and 30 percent cars in California will flip-flop to 70 percent cars and 30 percent trucks.

With the tremendous financial stress the industry is under today, a revenue and profit impact of this magnitude will further test the viability of many companies in the auto industry. The distress reaches into every corner of the industry.

General Motors expects to receive a "going concern" commitment from its auditors. We do not

expect Chrysler to survive in its present form. Ford had a crushing long-term automotive debt load of nearly $26 billion at the end of 2008, which is more than $5,000 for every vehicle.

Nationwide, 881 dealers closed in 2008, and the California New Car Dealer Association predicts the State could end up losing almost one-third of its dealerships this year, about 500 stores.

Large suppliers, such as Delphi and Visteon, are bankrupt or soon will be. In fact, the Motor Equipment Manufacturers Association has told the Treasury Department that approximately one-third of all auto part suppliers are in imminent financial danger.

It's at the supplier level that you can begin to see how interconnected the automotive industry is and how the fate of one company like General Motors can impact the entire industry. CSM recently completed a study showing that 58 percent of GM's North American suppliers also supply the Asian manufacturers.

Among Chrysler suppliers, 59 percent also

supply Asian manufacturers. For Ford, the figure is 65 percent. What this means is that the California regulatory agenda could start a domino effect of business failures reaching into every corner of the automotive industry and the national economy.

While my testimony at this point has focused on the risks of allowing California to independently regulate CO2, I would like to reiterate what I said at the beginning of the testimony. It is in the national interest to improve fuel economy and reduce CO2 emissions.

That is why I will conclude by understanding the importance of incorporating incentives for the consumer to embrace fuel efficiency in a national approach to CO2 regulation. Speaking in the aftermath of the 1973-'74 OPEC oil embargo, President Ford said that to provide a critical stability for domestic energy production in the face of world price uncertainty, prices should not be allowed to fall too far.

He knew that cheap oil would work against the long-term goal of energy independence. It was,

after all, price floors that helped pave the way for development of Brazil's ethanol economy, and it was high fuel prices that drove European and Asian automakers to build the world's best small cars.

Indeed, as fuel cost as a percentage of disposable income surged past 3 percent in the late '70s and '80s, the penetration of four-cylinder engines topped 50 percent in the U.S., 50 percent. But President Ford was prescient. As memories of gas lines and high record prices receded, consumers once again began demanding large vehicles and more powerful engines.

Fuel prices in constant dollars declined nearly every year from 1980 through 1999, and spending on transportation fuel as a percentage of disposable income fell by roughly half. All of this led to dramatic increases in the miles driven, a much higher mix of larger vehicles, and consumption of even more oil.

Today, just like in the '70s and '80s, automakers are scrambling to accelerate their plans to bring out fuel-efficient cars, this time with

Government assistance. But what happens if we return to an era of cheap oil?

It's very possible that the number of consumers willing to sacrifice comfort, space, and power in the name of fuel efficiency will fall, and the investment in green technologies will dry up, just like it did in the '80s. It's simple economics. Consumers and investors are not likely to invest in fuel-efficient vehicles and capital-intensive new technologies if a sharp drop in oil prices undercuts them.

It may already be happening. Oil prices are well below the level at which corn-based ethanol becomes uncompetitive. Families are spending approximately the same share of their disposable income on fuel today that they did in 2002, the heyday of the SUV.

The Renewable Fuels Association has estimated that of the country's 150 ethanol companies and 180 plants, 10 or more of those companies have shut down 24 plants over the last 3 months. That has idled about 2 billion gallons out of the 12.5 billion

gallons of annual production capacity. About a dozen more companies are in distress.

Shares of alternative energy companies have fallen even more sharply than the rest of the stock market. Witness the 69 percent decline last year in the PowerShares WilderHill Clean Energy Fund. Toyota has suspended work on its Prius hybrid factory in Mississippi, while Ford is expanding production of its F-150 pickup.

These are ominous signs because if automakers and the green energy investors can't earn a return on investments, the holy grail of energy independence and reduced CO2 will remain elusive.

This brings us back to President Ford's prescription. One sure way to stimulate demand for fuel-efficient vehicles is to make filling the tank more expensive. We believe a variable tax that effectively sets the minimum price per gallon of regular unleaded close to $3 per gallon would help ensure that there is no backsliding by consumers away from fuel-efficient technologies.

At this price point, green technology pays

for itself much faster through savings at the pump. For example, the breakeven point for the Toyota Camry hybrid is about 9 years at $3 a gallon versus 13 years at $2 a gallon.

In addition to the tax revenues that could help fund research and development or reduce the deficit, the carbon cap and trade system the administration is considering would have a similar effect, keeping energy prices higher than they are today. It should be seriously studied.

Either way, both programs would give automakers something they desperately need -- a measure of certainty that there will be market demand for small, fuel-efficient vehicles and, thus, hope for a return on their multi-billion dollar investment.

Thank you for your time, and I'm happy to respond to any questions.

MR. SIMON: Thank you, Mr. Fedewa.

Questions?

[No response.]

MR. SIMON: Thank you very much. We

appreciate all of your testimony, and we look forward to working with you as we go forward with our reconsideration.

Thank you.

I'd like to call up now Mark Jacobson, Louise Bedsworth, John Balbus, and Walter McManus.

Okay. Dr. Jacobson, when you're ready, why don't you start us off?

DR. JACOBSON: Thank you. Is that full-screen mode?

Thank you.

So, today, I want to talk about the effects of carbon dioxide on health in California versus other States and the effects of local carbon dioxide domes on human health in California. But I want to start by what's the basis for this discussion?

The waiver last year was denied based on two reasons specifically in the Federal Register. One, Administrator Johnson said that globally emitted carbon dioxide does not affect California's health more or less than it affects overall U.S. health. And second, because carbon dioxide becomes well mixed

in the atmosphere, local California carbon dioxide emissions don't affect California's air pollution any more than carbon dioxide emissions from outside of California affect California's air pollution.

So the first thing I want to point out is that there is no scientific study that actually shows either of these two points to be correct, and in fact, one of these points was echoed this morning by Senator Levin, who said the global warming impact of one ton of carbon in California is the same as the impact of one ton of carbon emitted elsewhere.

Similarly, it turns out there is no study that actually shows that this statement is true, either. So the question is where does this information come from, and what actually has been shown to be true?

So I want to show that there has been a study -- well, there have been many studies looking at the effects of carbon dioxide greenhouse gases on health and on ozone in particular. But there has also been a study looking at the effects in California versus outside of California of carbon

dioxide and also the local effects of CO2, which I'll discuss here.

So, first, let me just list a bunch of studies -- I'm not going to describe them -- linking global warming to enhanced ozone air pollution. So there are many studies on this over the last 20 years. And these studies, though, are mainly looking just at the effects just on ozone air pollution.

So they're not actually going back to looking at the health effects, but there are studies here that have looked at -- well, the middle ones have linked U.S. temperature changes to ozone health effects. And the ones at the top have shown sensitivity of ozone in California and organic gases to temperature changes in California and also the sensitivities of several other factors.

But the one study that I want to refer to today and talk a little bit in detail about is a study showing by cause and effect the link between global carbon dioxide emissions and U.S. ozone and particulate health effects through their feedbacks to temperature, water vapor, and meteorology, and then

the different impacts of this in California versus the United States.

This study came out 5 days after Administrator Johnson's first decision in December of 2007. It actually first came out then, but it was not used in Administrator Johnson's waiver denial. So I wanted to point this out. And I also then want to talk about a study on the effect of local CO2 emissions in California on local health.

So, first, what's the basis for looking at the effects of CO2 on human health in California? First, let's look at what's the effect of carbon dioxide on ozone and how it affects air pollution, ozone air pollution when air pollution is bad versus when it's good?

So this just shows a very simple calculation of both the water vapor and temperature effects of ozone when ozone is either high or low. The top figure shows that when ozone is high -- like in California, you have a lot of polluted cities. When you have high ozone, increases in water vapor increase the ozone further. And however, when it's

low, when ozone is low, increase in water vapor have little effect or actually slightly decrease the ozone.

There is a second curve here, which is this dashed line that shows that when you increase the temperature when air pollution is high, ozone also increases when the temperature is higher. But when ozone is low, an increase in temperature has no effect.

So the point I want to make here is that when you have high air pollution, higher temperatures, and higher water vapor due to carbon dioxide, increase the ozone further. But when you have low air pollution, there is no impact.

So without actually doing any further work, we can just look to see that California has 6 of the 10 most polluted cities in the U.S. And so, any -- even if it was an equal change in temperature and water vapor due to carbon dioxide, you're going to have a greater impact in California than anywhere else because the ozone is already higher.

And this turned out to be true. And this

would occur even if you had a 60 percent reduction in California vehicular emissions. It doesn't matter if the -- the ozone doesn't have to be this high. It could be much lower.

So I did a calculation looking at the effects with a three-dimensional model of the effects of carbon dioxide alone on air pollution in the United States through its feedbacks to temperature and meteorology and how that then affected human health. And I mapped the results to populations and used health effects data.

So, first, the difference here, these are difference plots showing differences in temperature, water vapor, and precipitation at first due to just the global emissions of carbon dioxide. And what it shows is that temperature goes up, water vapor goes up, and precipitation goes up -- all things that you expect from higher carbon dioxide.

But what else happens? Well, the higher temperature increases isoprene emissions from vegetation in the Southeast U.S., and that increases formaldehyde because formaldehyde comes from

isoprene. But there are also small changes in other parts of the U.S. In fact, while the isoprene also leads to what's called aerosol secondary organic matter, and you get some across the West Coast as well, this aerosol secondary organic matter.

And you get higher nitrates, especially along the West Coast, because you have a lot of nitrates and nitric oxide emitted in California in particular. But the ozone -- here is Los Angeles -- the ozone goes up because the water vapor and the temperature go up, and in the Southeast.

However, when you map the population distribution and the health effects, what you find from all this in terms of both the ozone and the particulate matter that for every 1 degree Kelvin increase in temperatures in the U.S., there is an increase in the death rate of about 1,000, or a range of 350 to 1,800 per year, compared to a background death rate from air pollution of 50,000 or so per year. And 40 percent of this is due to ozone, and 60 percent is due to aerosol particles.

And then if you look further, 30 percent of

the deaths occur in California, which has only 12 percent of the U.S. population. So in this respect, the death rate in California due to an incremental amount of global warming is 2.5 times greater than the death rate in any other State. And if you extrapolate this worldwide, simplistically you get additional deaths worldwide.

So that's the effect of global CO2 on California's health versus other States' health. It has greater impact in California. Now let's look at the effects of local carbon dioxide.

Well, there have been a lot of measurements of what are called CO2 domes, of carbon dioxide elevated CO2 in cities. And here are some of the studies showing these. And just to give you an example, here is Utah -- Salt Lake City, Utah. And these are some locations. Here is a location outside the city.

The background CO2 is 385 parts per million volume, while downtown Salt Lake City, the average over all the data is about 420 to 440 parts per million. If you go to Kennecott, which is outside

the city, it drops towards the background, 390 to 395.

So you get these elevated CO2 levels in cities, and one of those studies I showed before was for Los Angeles. Now I modeled what's the effect of just locally emitted carbon dioxide on local air pollution in California and Los Angeles in particular? And here are some results.

This shows the Los Angeles basin. Here is Catalina Island. Here is the Pacific Ocean. Here are the San Gabriel Mountains. San Bernardino Mountains are over here. Here is the Central Basin. This is the difference in CO2, the column CO2, when you have just locally emitted CO2 versus no locally emitted CO2.

There is actually -- there is no change in the emissions from outside of Los Angeles here. It's just only local CO2 emissions are being changed here, and this is for August through October. And I'll show you just results from three separate types of calculations for three separate periods or locations.

You get an increase in the water vapor in

Los Angeles just due to local CO2. That increases the particulate matter. Here is the PM2.5. You get an increase in the PM2.5, and here is the increase in the death rate, the annualized death rate of up to 75 people per year dying just due to local CO2 emissions in Los Angeles, not even counting the global CO2 change.

This implies that if you just control the local CO2 emissions you can get a response of a reduction in the PM2.5, and it will turn out to be the ozone. Here is the ozone. The ozone goes up. In this case, it's a little bit lower than the PM2.5 because you also got a reduction in UV radiation due to slightly enhanced clouds from the higher water vapor, but here is the increased ozone death rate. There is a slight increase in the ozone death rate as well.

Now let's look at the correlation. Here is the spatial correlation between changes in carbon dioxide and changes in ozone. There is a linear line drawn through all the data, but there is an increase. Same with the change in carbon dioxide, the change

in PM2.5 -- there is a linear increase of the local CO2 buildup with the local PM2.5. It's an increase.

And then let's look for February through April, lest you might think that, well, it's only a thing that happens in the summer. Well, February through April, it's the same thing. Here is the change in the PM2.5. There is an increase. Here is the change in the death rate due to PM2.5 just due to the local CO2 emissions.

The ozone also even goes up. Even though the absolute ozone levels are lower in February through April, you get an increase in the local CO2, local ozone death rate in February through April.

Now let's look at California as a whole. Here is 1-year annual changes for California. There is the change in the column CO2. You see the CO2 domes forming over Los Angeles, the Central Valley, a little bit over the Bay area, but mostly in the Los Angeles basin.

There is an increase in surface temperature. It's not a big increase overall, but it's from this local CO2 only, .033 averaged over

population weighted average. There is an increase in the column water vapor, mostly in Los Angeles.

These all impact -- here is the daytime ozone goes up slightly, and there is a slight enhancement in the death rate, mostly in Los Angeles, averaged over the year. The PM2.5 goes up, again it's hard to see, but in Los Angeles is mostly. And here is the death rate changes for PM2.5.

So to just -- almost done here. Just to show correlations again for the changes in carbon dioxide, here are changes in carbon dioxide, changes in temperature. So you can see the temperature is correlated positively slightly with carbon dioxide. Water vapor is correlated more strongly with carbon dioxide. The ozone is correlated positively slightly with carbon dioxide. The PM2.5 is correlated positively with the changes in carbon dioxide locally.

Then here is the correlation between water vapor and ozone. The increase in the water vapor increases the ozone. The increase in the water vapor increases the PM2.5. There is a positive correlation

just due to the local emissions of CO2 on local ozone and PM2.5.

So, finally, there is one other slide here I want to show is that wildfires and ozone are expected to increase just because of higher temperatures. Higher temperatures, which I didn't -- the wildfires I didn't look at in that study, but there have been other studies that have looked at, first, the correlation between wildfires and local ozone increases and the correlation between higher temperatures and wildfire increases.

So this shows higher temperatures leading to more wildfires, and this shows that more wildfires lead to more ozone. So that would be an additional contributor to local ozone increases.

So, to summarize, locally emitted CO2 produces CO2 domes, which increase local ozone and PM2.5, premature deaths in California by on the order of 50 to 100 per year. And these are occurring already. These are deaths that occur this year, last year.

Thus, reducing locally emitted CO2 will

reduce local air pollution and mortality. This result contradicts the basis for all previous local air pollution regulation worldwide, which has ignored CO2.

Globally emitted CO2 increases temperatures and water vapor, which increase ozone and PM2.5, increasing U.S. annual air pollution deaths by about 1,000 and cancers by 20 to 30 per 1 degree Kelvin rise in CO2-induced temperatures, with 40 percent due to ozone and 60 percent due to PM2.5. Increases in annual death rates worldwide are larger, and ozone and PM2.5 from wildfires will also increase due to CO2.

Finally, 30 percent of the additional deaths from global CO2 changes occur in California, which has 12 percent of the population. These deaths are occurring today, as temperatures have risen .75 degrees on average since pre-industrial times.

So these 300 deaths per year are occurring in California -- well, times .75 or about 240 deaths per year that are occurring in California due to enhanced CO2, are occurring this year, last year, the

year before. They are existing now. Thus, enhanced global CO2 damages California more than it damages other States.

Thank you very much.

MR. SIMON: Thank you, Dr. Jacobson.

I'd like to hear from Ms. Bedsworth, please.

DR. BEDSWORTH: Hi. Thank you all for inviting me here today.

I'm Louise Bedsworth. I'm a research fellow at the Public Policy Institute of California, or PPIC. PPIC is a private, nonprofit organization dedicated to informing and improving public policy in California through independent, objective, and nonpartisan research.

I'm going to provide testimony today on the expected impacts that climate change will have on the State of California. And while California is not alone in facing the risks posed by climate change, many of the changes are anticipated to have severe -- pose severe challenges to the State's economy, natural resources, and public health.

So, as has been talked about today, the most recent IPCC assessment shows that the effects of climate change are already being felt around the globe, including observations of increased global surface and air and ocean temperatures, widespread melting of snow and ice, and rising global sea level.

The best estimate for future warming globally ranges from just over 3 to just over 7 degrees Fahrenheit by the end of the century, depending on the path that emissions take. When we look specifically at California, by the end of the century, average annual temperatures in the State are expected to increase from 3 to 10 degrees Fahrenheit.

With successful efforts to reduce emissions and if the climate is less sensitive to these emissions, we'll be on the lower end of that range. But higher temperatures will result in sea level rise and changes in the occurrence of extreme events, such as heat waves and floods.

California is particularly sensitive to impacts in several areas, and I'll briefly outline a few of these, specifically, risks to the State's

water management system, coastal management, ecosystem management, and air quality and public health.

California's water management system is particularly at risk from climate change. The system encompasses water supply and delivery, flood control, water quality protection, species protection, and hydropower generation. While it's not clear what the impact of climate change will be on precipitation amounts in the State, higher temperatures will likely mean that more precipitation will fall as rain than as snow, which is a very important source of water storage for the State.

This will also change the timing of runoff in the State's rivers and streams, which will pose challenges for flood control, reservoir operations, and the maintenance of the current system of water exports through the Sacramento/San Joaquin delta, which is located on the eastern edge of San Francisco Bay.

Increasing temperatures are causing sea level to rise as a result of two factors, melting sea

ice and the thermal expansion of water. California is home to 1,250 miles of coastline -- which is a lot less than Maryland, I just learned this morning -- and also the largest estuary on the Pacific side of the Western Hemisphere, the San Francisco Bay.

One study predicts a rapid increase in global sea level over the coming century up to 20 to 55 inches by the end of the century. Impacts of this amount of sea level rise include bluff erosion, loss of beaches and wetlands, and threats to public and private infrastructure.

Over 4,600 miles of roadway in California lie within a quarter mile of the coast, and nearly three-quarters of a million people reside within a quarter mile of the coast. Sea level rise poses additional risk to the Sacramento/San Joaquin delta. Rising sea level will threaten the levee system and increase the risk of saltwater intrusion into the system.

Levee failures in the delta could disrupt the State's water supply system for several months to several years. Responding to this threat to coastal

areas will require balancing development, population growth, and habitat and environmental protection needs in the State.

California is considered a biodiversity hot spot. The State is home to numerous species that occur nowhere else on Earth. Habitat loss, deterioration, and fragmentation have placed more than 35 percent of the State's plants and nearly 14 percent of the State's wildlife at risk of extinction.

Climate change is adding to these existing threats. As the climate changes, species are migrating to find suitable habitat, and several studies have documented changes that are coincident with changes in the climate and are occurring today. A recent analysis by Audubon California projects that, on average, California landscapes could lose 6 to 19 percent of their bird species by the end of the century.

Climate change also poses risks to public health in California. California, as we've learned, is the home to the worst air quality in the Nation,

and climate change will make meeting the national ambient air quality standard for ozone even more difficult.

By the end of the century, the incidence of heat waves could increase markedly, where some cities in southern California experience over 200 heat wave days per year. This increase in the occurrence of heat waves will result in an increase in heat-related morbidity and mortality.

In 2006, California experienced a prolonged heat wave, and over 140 deaths were attributed to the heat by coroners, which is actually a likely underestimate. During that heat wave, there has been a documentation of dramatic increases in emergency room visits and hospitalizations.

All told, these impacts will have very high costs for the State. In response to the potential material and human health damage, the State will need to be ready to adapt to future climate changes to lessen these impacts, and this will entail financial, institution, and political commitments from a variety of actors and institutions.

Efforts to reduce greenhouse gas emissions are necessary to reduce the impacts and to minimize this need to adapt. But it is important to note that even with successful efforts to reduce emissions, some amount of change appears to be inevitable.

Even if all greenhouse gas emissions cease today, some amount of change would still occur over the next several decades due to inertia in the climate system. That is why it is so important to reduce emissions as soon as possible. The sooner emissions are reduced, the more rapidly California, the Nation, and the globe can get on the path to reducing the impacts of climate change.

MR. SIMON: Thank you very much.

Dr. Balbus, please?

DR. BALBUS: Thank you for this opportunity to provide testimony, and good afternoon.

I'm speaking today on behalf of Environmental Defense Fund, which is a leading national nonprofit organization representing more than 500,000 members across the country. EDF links science, economics, law, and innovative private

sector partnerships to create breakthrough solutions to the most serious environmental problems.

I'm a physician, a public health professional, and EDF's chief health scientist. I'm also a member of EPA's Science Advisory Board and Children's Health Protection Advisory Committee and have been active in the field of climate change and human health for some 15 years, most recently as a coauthor of the health chapter of EPA's Synthesis and Assessment Product 4.6.

And today, I'd like to highlight the compelling public health reasons for granting this waiver.

California is the most populous State in the country. Its population is projected to increase by 60 percent between 2000 and 2050, reaching nearly 60 million people by mid century. The number of people over the age of 75, who are more susceptible to many of the health effects of climate change, will increase 175 percent between 2000 and 2040.

In 2005, California had 32.5 million registered vehicles, exceeding the number registered

in any other State by a margin of almost 2 to 1. Californians continue to suffer some of the worst ozone and particulate air pollution, air quality problems in the country. And 38 of California's 58 counties are currently designated nonattainment for the health-based ozone standard.

The challenge of reducing ozone levels in California cities and agricultural areas is expected to only become harder with advancing climate change. As already noted, California's coasts are profoundly susceptible to sea level rise. California's coastline spans more than 1,000 miles, is densely populated, and the State's freshwater resources are critically vulnerable to a changing climate.

Lastly, California is prone to wildfires, the incidence of which is expected to increase if climate change progresses. These are all compelling and extraordinary conditions. Indeed, California's unique geography, meteorology, and large population all convey heightened public health vulnerability to climate change.

California's unique problems with ozone air

pollution, which contributes to worsening of asthma as well as premature death, have been well documented in the record of this waiver, as have the studies that indicate that warmer temperatures and increased water vapor associated with climate change will boost ozone concentrations more in high ozone areas like California's south coast and San Joaquin basins than in lower ozone pollution areas. And Dr. Jacobson's testimony today further gives an additional local CO2 reason for these heightened vulnerabilities.

California's air also has some of the highest levels of fine particulates or PM2.5 in the country. There are innumerable studies that link PM2.5 with premature cardiac death, with stroke, attacks of asthma and other respiratory diseases, and infant deaths. And work that we've seen today by Dr. Jacobson and others suggest that atmospheric changes associated with local carbon dioxide emissions may increase local PM2.5 concentrations as well.

The public health burden in California from ozone and PM2.5 air pollution is already unacceptable. Just one recent study by Jane Hall and

colleagues estimated that annually thousands of deaths, hospitalizations, and cases of acute respiratory disease can be attributed to ozone and PM2.5 air pollution in just the south coast and San Joaquin basins alone.

Clearly, California has an interest in abating these air pollution health effects by reducing the exacerbating impact of CO2 and climate change on local air pollution. But the public health threat extends beyond air pollution effects alone. The past decade has seen unusually severe repeated episodes of lethal heat waves and wildfires.

In 2003 and 2007, close to 2 million acres of southern California caught fire and caused widespread respiratory disease and death. The 2007 fires displaced nearly 1 million residents, destroyed thousands of homes, injured some 75 people, and killed 10. The 2003 fires had a similar toll.

Current changes in climate have led to longer fire seasons and more frequent severe wildfires, and projections for this century include a 9 to 15 percent increase in average area burned

annually by wildfires.

Similarly, California has experienced more severe heat waves in this past decade, including one in July 2006 that claimed some 140 lives, one in September of 2007 that killed at least 25 people. Just in one county, in Stanislaus County in the San Joaquin Valley, 29 heat wave deaths in 2006 made that event the most lethal catastrophe in that county since the 1918 Spanish flu epidemic.

A study in the proceedings of the National Academy of Sciences from 2004 concluded that California was likely to experience large increases in heat waves and average temperatures. It estimated that the number of heat wave days in Los Angeles could increase between four and eightfold by the end of this century.

Importantly, in addition, the authors concluded climate change and many of its impacts scale with the quantity and timing of greenhouse gas emissions. In other words, earlier reductions in greenhouse gas emissions were more effective in the study in avoiding severe health impacts than delayed

reductions.

So, in summary, global climate change poses a clear and present danger to the health of Californians, who are at risk of severe drought, dangerous heat waves, rising sea levels, more frequent wildfires, and worsening smog and particulate pollution. Given these serious health impacts, there is simply no justification for EPA's prior decision to deny California's application for a waiver.

Reducing greenhouse gases today is essential to begin addressing the current and future serious health effects of the climate crisis for millions of Californians. Environmental Defense Fund urges EPA to immediately and finally grant California's request for a preemption waiver.

Thank you again for the opportunity to testify today.

MR. SIMON: And thank you.

Dr. McManus, please? And welcome.

DR. MCMANUS: Thank you. Thanks for the opportunity to testify today.

I'm Walter McManus, and I'm the director of the Automotive Analysis Division at the University of Michigan Transportation Research Institute. Before joining the university, I worked for General Motors and J.D. Power and Associates and also an automotive supplier.

Today, I'm going to give testimony on the industry's ability to meet California's standards. First, having been a participant in the industry and a longtime observer of the industry, I can attest that the auto industry is basically tone deaf when it comes to consumers and society.

For years, internal research, consumer research showed us that consumers value fuel economy. We rejected that because it didn't meet with what we believed they should believe. And years of product development show that we didn't respond to what they wanted.

For example, for more than a decade, the number-one complaint of large SUV buyers was fuel economy. Now, we said they knew what they were buying. But if the number-one complaint on a vehicle

is it doesn't have enough power, we put stronger engines in it. A recently published article by a former GM executive confirms the practice, too.

The argument that the standard interferes with consumer choice and manipulates the market is wrong. Instead, I will explain that the industry has a long history of interfering with consumer choice and manipulating the market, managing demand.

The industry's chief complaint about the California law is that it would create a patchwork of regulations that interfere with consumer choice and manipulates the market by requiring automakers to use different sales strategies in each State. The irony is automakers already use different sales strategies in different States, as well as market areas within States. Their strategy, however, is being used to promote and propel the sale of large vehicles in the market.

According to the argument against patchworks or against California waiver, it has -- it causes harm because it might require automakers to shift their product mix. However, shifting product

mix or managing demand to match supply is one of the key reasons that the automakers have geographically based sales strategies in the first place.

With or without a national standard, the automakers will continue to use at least 50 different sales and promotion strategies. Automakers have long recognized the importance of geographic location in balancing vehicle demand and supply and have developed very sophisticated marketing tools to handle the complex issues involved.

The tools already exist and would provide a low-cost means of meeting Pavley's requirements in California and the 13 other States that have adopted those standards. Currently, and for at least the last 8 years, automakers primarily use their geographic sales strategies to manage demand to maintain sales of gas-guzzling SUVs in the face of rising and then spiking fuel prices.

As long as the rise in fuel prices was only 10 to 15 percent per year, for 2002 through '07, the strategy worked. Consumer incentives, especially for SUVs, soared to unprecedented levels, nearly doubling

every year from 2001 to 2005. Meanwhile, automakers spent billions developing the next generation of the same gas guzzlers that they were spending billions of dollars to manage demand by bribing consumers to buy them.

When fuel prices spiked above $4 last year, the strategy spectacularly failed. Even the largest incentives in history were not enough to prop up sales of SUVs. Consumers want fuel economy, and they showed last year that they will move quickly to other vehicle categories from whichever automaker can deliver them.

These are the same vehicles that the industry told us for years that people needed. They need the towing capability. They need the off-road capability. Well, they didn't need it last year when the price of fuel spiked, and people who used to have SUVs switched to crossovers and cars.

Indeed, they told us we couldn't live without them. But even with gigantic rebates last year, they still left SUVs for smaller, cleaner, more fuel-efficient cars and crossovers. And when the

price of gasoline came down, consumers didn't rush back to the big vehicles. The incentives that the industry had at the end of last year were unprecedented, and they just cleared out inventories of the vehicles that they had been holding onto for months.

We're in very hard financial times right now, no doubt. And many ask why require the industry to meet higher standards during a deep and worsening recession?

The truth of the matter, as I see it, is that the very survival of the industry depends on shifting the mix of vehicles away from a strategy that is very sensitive to fuel price spikes and recessions -- that is SUVs and low fuel-efficient vehicles -- in the same direction that CAFE, Pavley, and potential future greenhouse gas emissions at the national level by EPA or some other agency.

Every economic recession that we've had in the last 60 years has been associated with spiking fuel prices. I'm not a macroeconomist. I don't know cause and effect there. But every one has been

associated with higher fuel prices. It doesn't take a degree in economics to expect that maybe it will happen again.

But in the 1990s, the industry adopted the strategy to exploit the SUV loophole in CAFE, and it made the industry and all of us now, since we're providing money for the bailout, excessively vulnerable to fuel prices and to recessions that tend to go together. You don't have to be a doom-and-gloom economist to realize that volatility in fuel prices is not going to go away and recessions will happen again.

The industry really needs a mix of vehicles that is robust to these inevitable, yet sadly, for economists, unpredictable events. Pavley prods them in the direction that they need to go anyway.

I know that our industry employs some of the best and the brightest. And when they're given the right direction, they can achieve technological advancements that we probably can't imagine today.

The industry has technology, both engineering and in marketing, to meet the standards.

And since we're being asked to fund their transformation to viable companies, we all have an interest in nudging them along the clean technology curve that is key to their survival.

Thank you.

MR. SIMON: Thank you for that very interesting testimony, Dr. McManus.

Any questions? We've got one.

MR. DICKINSON: Hi. Excuse me. A question for Dr. Jacobson.

My wife is an environmental chemist. I'm not. I just had a clarifying question on the CO2 domes. How are those created, and is the localized CO2, in and of itself, causing an increase in water vapor? Or what's causing that water vapor?

DR. JACOBSON: Well, the CO2 domes are due to the local emissions from the vehicles and power plants and all the sources of CO2 in a city. So they're not -- they're due to the local emissions. And actually, if you look at the daily variation, and during the day, they peak, and then they go down some at night, and then they go back up again.

So the CO2 is always mixing to the larger scale, but you always have a new source of CO2 to replenish it. So it's always higher, the concentrations in the column are always higher over the city than outside the city, even though there is a gradual movement to the large scale.

Then in terms of the higher water vapor, well, it's due to initially the higher temperatures from the CO2 because the CO2 absorbs infrared radiation from the surface, and it heats up the air a little bit and the evaporate soil water from the soil.

In Los Angeles, you also have water from the ocean, and if you can -- the other thing is, in Los Angeles in particular, because you're heating up the land relative to the ocean, you enhance the sea breeze slightly, and that blows in more water from the ocean. And that can increase the water, too.

So there are really two sources of water. One is soil moisture, and the other is transport from the ocean and also evaporation from the ocean.

MR. DICKINSON: Thank you.

MR. DOYLE: Also for Dr. Jacobson. Was there any critical reaction to your December 2007 paper?

DR. JACOBSON: No, there is nobody has contradicted it or even put it in a letter to try to argue that it's incorrect. I haven't heard any contradiction to the paper in terms of the results.

And yes, but it's been -- but I think it's because it makes sense because I showed it in two ways. One is through just the analysis of the chemistry, as that graph I showed you was just a box model calculation showing how ozone should increase when the air pollution is high, compared to when it's low.

And so, just based on that heuristic argument, which is based on chemistry calculations, you could make the argument extrapolated to California. But then I showed it in a second way, which is actually using a three-dimensional model of cause and effects from the global scaled to high resolution over the United States, that you get the same result in two different ways. In the second

way, you can actually quantify it in the health effects.

But there has been no critical reaction to it.

MR. SIMON: Okay, thank you. And again, we appreciate the panel's testimony, and we look forward to working with you as we reconsider the waiver.

We're going to try to squeeze one more panel in before a short lunch break. So I'd like to call up David Doniger, Ann Mesnikoff, Catherine Bowes, and Tim Telleen-Lawton. Thanks.

Mr. Doniger, when you're ready, why don't you start us off?

MR. DONIGER: Yes, thank you very much.

I admire your fortitude, all of you, and not -- and just about everything has been said, but not everyone has said it. So we'll try to fill in some gaps.

Thank you for the opportunity to testify again. I am David Doniger. I'm policy director and senior attorney at the Natural Resources Defense Council, and I'm here on behalf of our 1.2 million

members and supporters who have been supporting California's leadership on this initiative since 2002.

We were enormously pleased when President Obama directed EPA to reconsider the waiver denial and equally so when Administrator Jackson moved quickly to get this process underway. I'll focus today on certain legal issues that EPA has posed in the hearing notice and basically reviewing what we see as some of the errors in the previous decision, the denial.

And I've given you a written statement, which I will not read the whole thing out. So, first -- and most of these points, I believe, have been covered. So I am going to be brief.

The denial decision focused on the second waiver criterion, the question of whether California had a need for such standards to meet compelling and extraordinary conditions. And the State has pointed out and we agree that the decision last year erred in changing the focus from the question as it had been posed for decades, which is does California need its

own separate program? And changing that focus to does California need these particular new standards?

We think that the language in 209(b)(1)(B), which refers to the need for such State standards, that refers back to the language in the previous sentence, which refers to the California standards in the aggregate. And thus, the judgment, which is to be made about compelling and extraordinary conditions and the need for the standards, is with respect to the whole State program, not with respect to the individual standards.

And that view was held at least since 1984, when articulated by former Administrator Ruckelshaus, and it was actually articulated 3 years ago by former Administrator Johnson before he changed his mind. So, in a 2006 decision, he articulated the same whole program test.

Administrator Johnson didn't articulate a legal rationale for the change of view, more a policy rationale. One that said it was his conclusion that Congress didn't intend the waiver procedure to be available to California to deal with a global

problem, as he characterized global warming pollution.

And that's the same reasoning, the same kind of reasoning from the policy result back through to the legal conclusion that the Supreme Court rejected in the Massachusetts case, where albeit on a different provision, 202, the administrator took the position that it couldn't -- that air pollutants couldn't include CO2 and other greenhouse gases because he started from the policy premise that Congress didn't intend EPA to be dealing with global warming.

The Supreme Court basically said you've got that backwards. You have to start from the text of the statute. The text is inclusive. CO2 is encompassed in the term "air pollutants." And by the same token, there is nothing in the language of 209(b) which would exclude global warming pollution from the list of pollutants, the list of conditions that EPA -- excuse me, that California can deal with and EPA can grant a waiver for.

So even with the interpretation that the

administrator took, the one that focuses on those standards separately, we think he made two errors in that decision. The first, Administrator Johnson basically just restated his initial premise. The waiver proceeding doesn't allow, in his view, California to deal with pollutants that cause global warming.

Why? He said because, in his view, the waiver proceeding was to deal with problems which are exclusively local or exclusively self-contained within California. And that's not even a fair description of the ozone problem. `Because ozone smog is caused by pollutants that drift out from California, that drift outside the State and contribute to ozone smog in other places. And it's also recognized that a portion of the ozone smog, which California experiences, originates from out of the State, including places as far away as China.

So the fundamental paradigm that Administrator Johnson seemed to be using that some problems are entirely self-contained in California and others are not is wrong. And the ozone problem,

which California undoubtedly has authority to address, has the same physical characteristics as the global warming problem.

The second contention that Administrator Johnson made was that California needed to show that it had this problem in a sufficiently different manner, a sufficiently different character or severity than the rest of the Nation as a whole. And because that issue has been rather well covered by California and others, I really will just summarize.

I mean, there is lots of testimony that California has a greater variety of severe global warming impacts than any other State, and they range from increased smog levels, reduced water storage in the Sierra snow pack upon which the State relies for a lot of its water supply, sea level rise, saltwater intrusion, agricultural damage, increased wildfires. You name it, California has got everything except possibly melting permafrost.

And this complex of very severe conditions of impacts certainly qualifies as severe -- as compelling and extraordinary in their own right, and

even if there were a comparative test, it would be well satisfied by California that could show that it's got what everybody else has got, only more of it and worse.

So, again, we don't believe Administrator Johnson's legal criteria are the right ones, and the reasons are set forth in my longer written presentation. But even as applied, he came to the wrong conclusions.

I would also add, and others have covered this, that ozone -- excuse me, that global warming worsens smog formation in the State in at least two ways. One, by raising ambient atmospheric temperatures, and that means you get more ozone smog out of the same amount of precursors. And also because the -- and so, by reducing the temperature, even by a little bit, California's greenhouse gas regulations are contributing to solving the ozone problem.

They also contribute to solving the ozone problem by reducing the total amount of gasoline and, therefore, gasoline evaporation that occurs in the

whole gasoline distribution system. And that contribution to reducing ozone smog is something the State has a right to take into account as a benefit of what it's doing and a rationale for what it's doing.

I guess I will not address here in the oral statement the issues that are posed by the third clause, the question of inconsistency with 202(a), except to say that Roland Hwang, my colleague, will delve more deeply into technological feasibility, economics, and so forth, and California has presented the legal tests for analyzing lead time and technological feasibility, economics, I thought, extremely well.

I guess I'd just close by switching from my lawyer's hat to my policy director's hat and underline an observation that several people have made. More and more, the carmakers and the dealers understand that their market has fundamentally changed. Global warming isn't going away.

And when the economy recovers and people start buying cars again, automakers know that oil

prices are going back up. In its latest request for Federal taxpayer assistance, General Motors projects a return to $130 a barrel oil by 2014.

If taxpayers are going to put more money into these companies, we need to be sure that they'll be making products that make sense when the customers come back, and this is equally true for the companies that aren't seeking taxpayer assistance. They need to position themselves to have the products that make sense when the customers come back.

So to survive in the world that's coming, they need to be making the cleaner, more efficient vehicles that the California standards will drive.

Now there has been concern about issues of patchwork and so on. I think some of the witnesses have compellingly demonstrated that the companies already market in localized statewide strategies that shouldn't be a big problem.

There hasn't been any data submitted to California that we're aware of that demonstrates that there are problems in the early years. If there were a demonstrated problem, it seems it could be resolved

through such concepts as multi-state averaging, and those are compatible with granting the waiver. They're certainly not a justification for denying the waiver.

There has been a lot of call for national uniformity, for nationally uniform standards. And I would just end by saying the pathway to get there starts with granting the California waiver. And then the California performance level serves as an important benchmark, as the important benchmark for the formation of national standards.

So at least for NRDC, we don't have a problem with national standards in the attribute-based format. We do want to see national standards that achieve the performance, the emissions performance, greenhouse gas emission standards at the national level from EPA that deliver the emissions performance at least equal to what you would get if the California standards applied nationwide.

If that formula, if that criterion can be used, and EPA, after granting the waiver, develops those standards in parallel with NHTSA, then I think

there is a way forward to get to the practical uniformity that the automakers are asking for and, at the same time, keep California in its historic role of being the first to address a set of years and to push the technology forward, which can then be leveraged nationwide.

This is a proven formula, and this is why we support granting the waiver.

Thanks.

MR. SIMON: Thank you, Mr. Doniger.

Ms. Mesnikoff?

MS. MESNIKOFF: And we have some slides. So I'll take the first slide, put that up when I get started.

My name is Ann Mesnikoff, and I direct Sierra Club's Green Transportation Campaign, and I'm testifying today on behalf of Sierra Club's 1.3 million members and supporters nationwide, including our 170,000 members in 13 chapters that comprise Sierra Club California and our members in the 14 States that have adopted the California standards.

Thank you for the opportunity to testify

today and for your incredible patience so far.

Sierra Club urges EPA to grant the California waiver it needs to implement its greenhouse gas standards in full, without conditions or delay. And we'll submit our full comments to the docket by the April deadline.

The protracted history of California's effort to secure the right to implement its standards to reduce greenhouse gas pollution spewing from new vehicles has yielded strong public interest in the outcome. The Sierra Club invited our members and the public to join us here today at the hearing by signing a photo petition.

Americans from States that have followed California's lead and are waiting to implement their standards and from States that have not even considered adopting the standards understand the importance of addressing global warming pollution from vehicles directly, and they answered our call to join us at the hearing today with a simple message. EPA holds the keys to clean cars.

So that's over the past week, more than

1,000 people signed our photo petition, taking our invitation to bring them to the hearing today as virtual participants. This room, well, it was packed this morning. Not so much now. But Americans from Alabama to Alaska to Washington State and D.C. wanted to testify today in support of EPA's decision to review the prior administration's waiver denial and ultimately to grant the waiver, consistent with the terms of the Clean Air Act.

The saying goes, "A picture is worth 1,000 words." So perhaps 1,000 pictures is worth 1 million words? EPA does hold the keys to clean cars in California and for as much as 40 percent of the new car market in the United States. The message of our photo petition is clear. Americans urge EPA to grant California the waiver to allow it and the other States to implement their standards that will, over the next 7 years, put technology to work to make cleaner cars.

Our promise was to ensure that all of the people who signed our photo petition would be presented at the hearing. So here they are. Many

just sent a photo. Others included a personal message to EPA to act. And we'll submit all of the photos and all of those messages to the docket as well. But on their behalf, Sierra Club urges EPA to grant the waiver as soon as possible.

I also wanted to bring the voice of one of our lead California volunteers to the hearing as well on an issue that is front and center to the waiver review -- California's compelling and extraordinary circumstances.

In an email, he emphasized that, "Severe climate disruption is not some remote future possibility. In California, we see the problem as a present danger, visible in many ways, growing more impactful with every week, month, and year that society and its volunteers fail to use the measures now at hand to mitigate the problem and keep it from becoming irreversibly, irretrievably catastrophic." So that's the end of his quote.

Our written comments will provide greater details on the developments of global warming science and impacts in California. But the recent news of

the water crisis in that State highlights a particular vulnerability of California to climate change. So we all understand that snow pack is not just about skiing conditions, but the availability of water for drinking and growing nearly half the Nation's fruits and vegetables.

Sierra Club urges EPA to correct the error Administrator Johnson made in considering California's greenhouse gas standards in isolation of the program as a whole and then finding that California did not need its vehicle emission standards to meet compelling and extraordinary circumstances. In fact, the March 6th Federal Register notice just over a year ago includes a litany of global warming impacts in California and other States.

The Clean Air Act does not require that California be the only State impacted by pollution, but it satisfy the criteria that are set forth in the Clean Air Act that have guided EPA into granting prior waiver requests. These standards meet those criteria.

On the issue of lead time and compliance with the clean car standards, the auto industry has invested millions, if not tens of millions, fighting these standards in the courts, and it has lost in every case. Since 2005, it has only become clearer that CARB did its job well, setting standards that are technically feasible and that the industry should be required to comply with this year.

The industry has used every tactic to delay and should not be rewarded by changes in the compliance schedule or stringency. From the range of technologies in use in vehicles today, from variable valve timing, continuously variable transmissions, cylinder deactivation, and other technologies that have been mentioned, to emerging technologies like plug-in hybrids, all-electric vehicles, the automakers must be required to deliver these technologies to deliver maximum emissions reductions rather than increased weight and performance.

Just last week, Ford announced that it was opening an engine plant that had been idle since 2007. This plant will produce Ford's EcoBoost

engine, one technology that will improve fuel -- reduce fuel consumption by 20 percent and achieve a 15 percent reduction in emissions. The technology will be available on 90 percent of Ford's cars and trucks by 2013.

Last fall, I went up to Consumers Union test track, and I drove every possible advanced technology vehicle there was -- fuel cell vehicles, plug-in vehicles, everything that was there. But the EcoBoost was perhaps the most important technology that was there that day because it can be quickly applied to Ford's fleet to reduce their emissions and help them meet California standards.

Finally, GM and Chrysler are requesting billions in taxpayer dollars. In their request to the Treasury Department, they acknowledge that they can meet California standards if the waiver is granted. Producing clean cars is key to revitalizing our auto industry and making them more competitive now and for the long term.

So I'll go back to my slide of the EPA logo and will conclude by saying EPA should quickly grant

the waiver. EPA holds the keys to clean cars. We ask them that you put them in our hands.

Thank you.

MR. SIMON: Thank you. I have to say I'm not sure we've ever seen the logo so attractively displayed. Very, very creative.

And we will note for the record that there is "Version 2" of the buttons that are floating around. We'll have to see how you're going to put that in the docket as well to --

MS. MESNIKOFF: We'll squeeze it in.

MR. SIMON: There you go.

Ms. Bowes, please?

MS. BOWES: Thank you.

I'm Catherine Bowes with the National Wildlife Federation, and I'd like to thank you for holding this hearing and for the opportunity to testify on this issue of critical importance to the State of California, the Nation, and the planet.

I represent National Wildlife Federation and our over 1 million members nationwide, 140,000 of which reside in the State of California, and also on

behalf of our State affiliate organization, the Planning and Conservation League of California, with their thousands of members in the State as well.

I want to start by applauding Administrator Jackson for reconsidering EPA's 2008 decision to deny California's Clean Air Act waiver request for their State motor vehicle emissions standards. This announcement was a distinct, long-overdue call to action driven by the facts of a warming planet and an economy in crisis.

California has a long history of leading the Nation in setting protective environmental standards, and the denial of the waiver blocked progress in reducing greenhouse gas emissions from major sources at a time when it's most needed.

The National Wildlife Federation strongly urges EPA to grant the California waiver to allow it to move forward and implement its motor vehicle emission standards. The waiver request is fully consistent with the requirements of the Clean Air Act and EPA's longstanding interpretation of California's authority to set standards that are more stringent

than what is in place, if anything, at the national level.

Granting the California waiver will provide sound direction to the auto industry to once again lead and build the kind of cars that not only America needs and wants, but what the world needs. Our energy policy should no longer be based on denial and delay, but instead on sound science that tells us we don't have to choose between efficient vehicles, jobs, and confronting global warming.

EPA must grant this waiver without condition because California clearly faces compelling and extraordinary threats from climate change that justify the need for stronger standards. Further, California's rules are based on solid factual evidence that auto emissions are a major contributor to global warming in California and that the standards they have developed are feasible using current technology.

There is considerable evidence in the record that speaks to each of these points, and the National Wildlife Federation believes that as EPA

reviews this information with a fresh perspective, guided by science and the rule of law, the only justifiable conclusion will be that the waiver must be granted.

Many of the other speakers today have gone into great depth on the legal and scientific arguments supporting the waiver. So I'd like to limit my testimony here to some of the compelling and extraordinary circumstances facing California.

California's environment, public health, and economy are all at risk as climate change worsens air quality, threatens water supplies for people and agriculture, alters and intensifies wildfire patterns, and damages ecological systems. The National Wildlife Federation and our members are particularly concerned with how these impacts will affect the State's fish and wildlife resources.

California is already seeing signs of climate change impacts on its water systems. Average snow pack in the Sierra Nevada has decreased by 11 percent since 1950, and peak overflows are as much as 4 weeks earlier in the spring. Sea levels along

California coasts have risen by 4 to 8 inches over the last century.

Just last week, California newspapers announced that salmon fishing may be banned in the State this year due to dramatic population declines. Scientists have pointed to warmer ocean conditions as one of the most likely contributing factors to this problem.

These climate changes are projected to intensify, causing significant adverse impacts on many of California's most popular fish and waterfowl species. For example, average snow pack in the Sierra Nevada is projected to decrease by as much as 12 to 47 percent by mid century. More rain and less snow during winter will increase the risk of winter floods that destroy prime habitat, scour away the gravel nesting sites of salmon, trout, and steelhead.

Additionally, less mountain snow pack that melts earlier each year will cause summer water shortages that constrict coldwater fish habitat, hamper fish migrations, increase salinity in coastal estuaries, and increase pressure to divert water from

rivers and wetlands that are critical for waterfowl and fish.

Warmer water in our rivers and streams will increase fish disease rates, lower oxygen levels, and reduce growth rates, strength, and swimming ability for coldwater species. By 2090, 25 to 41 percent of California's streams currently suitable for trout will likely be too warm.

Hotter, drier summers with low stream flows threaten waterfowl species that breed in California over the summer and will increase irrigation costs, threatening rice farming and the habitat it provides for migratory waterfowl that overwinter in California's Central Valley.

Increasing sea level and storm surges will erode beaches and inundate coastal estuaries and wetlands. An additional 9 to 35 inches of sea level rise is projected for California by the end of the 21st century if greenhouse gas emissions continue unabated.

This will result in extensive saltwater inundation of key fish and waterfowl habitat,

impacting diving ducks especially hard, which are already experiencing habitat loss from dredging levees and other development in the State.

Bird species that rely on coastal habitats that abut developed areas will be blocked from moving inland, such as the Western snowy plover, California least tern, and other species prized by birdwatchers.

Global warming is making ocean waters warmer and more acidic, shifting the range of viable habitat for some fish species and impacting the marine food web. These changes affect many popular fish in California, such as the Chinook salmon and steelhead, which spend up to 90 percent of their lives in the Pacific Ocean before returning to their historic river systems in California to spawn.

In 2008, NWF and the Planning and Conservation League released a report highlighting these impacts in greater detail, which I will submit to the docket along with my testimony.

In conclusion, I'd like to again thank Administrator Jackson for reconsidering EPA's flawed decision to deny California the waiver at issue

today. Granting the waiver without condition is not only consistent with the Clean Air Act, but is also essential to ensure that rapid progress is made in addressing the sources of global warming pollution in this country.

Thirteen other States are lined up to move forward and follow California's lead, and EPA should not stand in the way. Additionally, we applaud Administrator Jackson for stating clearly in her first week on the job that she intends to lead EPA in complying with the Supreme Court decision recognizing the agency's obligation to address climate change.

This should involve moving quickly to make an endangerment finding, followed by a rule-making to set strong national standards for vehicles and other sources. EPA can and should set strong national standards for cars and trucks that are at least as stringent as what California has developed.

I'd like to echo NRDC's comments that the California waiver really is the pathway to those standards. In doing so, it is essential that EPA does not, in any way, undermine California's

authority to continue to set State-specific standards and continue its long tradition of leading the country in policy innovation.

With a strong, effectively structured national emission standard, we can advance cutting-edge technology that will restore America's place as a world leader in the auto industry, create and maintain jobs here in this country, save consumers money, and, most importantly, reduce our global warming pollution.

The National Wildlife Federation and the Planning and Conservation League both look forward to working closely with EPA to finally develop long-overdue regulations to cut our global warming pollution. It's clear that the administrator intends to bring a fundamentally different approach to this urgent issue, and we welcome the opportunity to help advance our shared goal of solving the climate crisis.

Thank you.

MR. SIMON: Thank you.

And Mr. Telleen-Lawton, please?

MR. TELLEEN-LAWTON: Great. Thank you very much.

My name is Timothy Telleen-Lawton, and I'm a global warming advocate with Environment California. Environment California has over 170,000 members across the State, and we're part of a national federation known as Environment America, with a little less than a million members nationwide.

I first want to thank President Obama and the EPA Administrator Jackson for reconsidering this waiver. This is obviously a huge opportunity to make a big first step on global warming.

Global warming is a challenge of historic scale, and we can still stave off dangerous global warming pollution, but only if we get started right away. My testimony today will focus on the urgent need to quickly and significantly reduce global warming emissions and the role of California's vehicle emissions standards in beginning to achieve those emissions reductions.

The science is clear that the world faces dramatic consequences if we fail to rein in global

warming emissions from the burning of fossil fuels. Yet science is also clear that we do not -- that what we do now to reduce emissions will make a real difference and enable us to provide -- to avoid the worst consequences of a warming world.

The Intergovernmental Panel on Climate Change stated that the evidence of global warming is unequivocal and concluded that it is very likely that human activities, primarily the burning of fossil fuels, are responsible for most of the observed increase in global warming average temperature since the mid 20th century.

And IPCC's scientific assessments, including the fourth assessment report, are unparalleled in their rigor, comprehensiveness, and extensive review both by scientists and governments worldwide, including the United States Government. As such, its conclusions should be given the utmost consideration today.

And to prevent large-scale dangerous impacts of global warming, such as setting in motion the complete melting of Greenland ice sheet and mass

species extinction, we must limit the increase in global average temperature to 2 degrees Celsius over pre-industrial levels, which is about another 2 degrees Fahrenheit from where we are today.

The United States is responsible for about a quarter of the cumulative carbon dioxide emissions from energy sources worldwide, making it by far the largest contributor to the problem. And yet global warming emissions continue to rise each year in the United States, increasing about 20 percent since 1990.

Light duty passenger vehicles are the second-largest source of global warming emissions nationwide, and since 1990, carbon dioxide emissions from motor gasoline consumption have increased by about a quarter.

To reverse this trend and prevent dangerous global warming, urgent action is needed to reduce emissions in all levels of government. And over the last 4 years, California has consistently demonstrated leadership in developing and implementing standards to curb pollution from motor

vehicles, as is the case with their first-of-a-kind standards to reduce global warming emissions from new motor vehicles.

A total of 14 other States, including District of Columbia, have adopted those standards, and these State comprise about 40 percent of the vehicle market today.

So Environment California did an analysis to quantify the benefits of the standards across the States that were calculated by the CARB, and the 14 States' standards will cut global warming emissions from cars, light trucks, and SUVs by 451 million metric tons by 2020, which is the equivalent of taking 85 million of today's cars off the road for an entire year. And 30 million of those cars would be from California alone.

Additionally, the 14 States, including D.C., standard would reduce gasoline consumption by over 50 billion gallons by 2020 and enable consumers to save up to $95 billion in at-the-pump savings.

Now, if all 50 States chose to adopt into the standards, the total global warming emissions

would grow to 1,283 million metric tons by 2020, which is the equivalent of taking all of today's cars and light trucks off the road for an entire year. So these are impressive savings, and States must be allowed to fight global warming, and these standards are a critical first step in California's waiver.

So California standards for new motor vehicles clearly meet the criteria for a waiver of preemption of the Clean Air Act. First, the standards are unquestionably at least as protective of public health and welfare as the Federal standards, since the Federal Government has failed to set global warming standards for vehicles.

And I won't go into too much more detail on all of the other things that my colleagues have talked about, but I do want to say that California continues to face compelling and extraordinary conditions that justify the need for separate State standards.

Finally, in conclusion, I urge the EPA to quickly grant California's waiver request. Global warming demands immediate action at all local, State,

and Federal levels, and EPA has an historic opportunity right now to allow States to do just that.

So thank you very much for the opportunity to participate in these proceedings.

MR. SIMON: Thank you very much.

Thanks to the panel for your testimony. We look forward to working with you all as we move ahead in this process as well, too.

We are going to -- I've been told I'll have a mutiny if we don't take a break here for the panel. So we're going to take a short, half an hour lunch break.

So, for those of you that are up next, we'll be calling Roland Hwang, Jim Kliesch, Dr. Mark Cooper, Lena Pons, Joanne Ivancic, and Robert Kozak. But you've got a half an hour. We'll see you back there then.

Thanks.

[Recessed.]

MR. SIMON: Welcome back. Let's get started with our next panel here. And to start us

off would be Mr. Roland Hwang. Please, Roland?

MR. HWANG: Good afternoon.

Thank you for the opportunity to testify in favor of California's request for a waiver preemption under Section 209(b) of the Clean Air Act. I've provided the staff with a written testimony, a more detailed testimony, and I will -- in the interest of time, I will -- my oral remarks will be extracted from those, and they will be fairly brief.

I am the vehicle policy director and a vehicle technology expert for the Natural Resources Defense Council.

As Mr. David Doniger, our policy director of the climate center, previously noted in his testimony this morning, NRDC's legal conclusion, supported by our technical analysis, is simple and direct. EPA has only one choice. It must grant California's waiver request and without delay.

In my testimony, I will supplement Mr. Doniger's testimony by presenting our technical responses to the relevant questions posed by the EPA in its hearing notice. I will address both the

original question notice before the March 6, 2008, denial regarding whether California standards and accompanying enforcement procedures are consistent with Section 202(a) of the Clean Air Act.

I will also address the new question posed by EPA in its most recent notice, "The effect of the March 6, 2008, waiver denial on whether California's greenhouse gas standards are consistent with Section 202 of the act, including lead time."

Based on my analysis of recent trends in vehicles and fuels markets, my conclusions are as follows. First, we strongly concur with the California Air Resources Board staff's presentation this morning, as well as other technical experts, including Mr. Jim Kliesch here from the Union of Concerned Scientists, that California's greenhouse gas standards are technically feasible and cost effective and, therefore, consistent with Section 202(a) of the act.

In fact, developments since the previous waiver hearing in May of 2007 serve to further strengthen this case that the program is cost

effective and technically feasible. The most important of these developments are higher oil prices, a market shift to cleaner cars, and the passage of new Federal fuel economy standards.

A second conclusion in regards to lead time. Our analysis shows that there is no impact of the March 6, 2008, waiver denial on the technical feasibility of implementing the program starting in model year 2009. And therefore, there is no basis for delaying the program.

The reason for this is the same as is stated above. High fuel prices, shift to cleaner cars, and new Federal fuel economy standards have resulted in the automakers building vehicles and selling a product mix that already allows them to comply with the California greenhouse gas standards in model year 2009 to '11. In fact, the industry as a whole will likely exceed the program requirements for the first 2 years, allowing them to bank credits for future compliance.

We also note that our analysis strongly indicates the auto industry is also able to comply

with the program in the 13 other States with California's clean car program for model years 2009 to 2016, although we note that such an assessment is beyond the scope of the California waiver proceeding under Section 209(b) of the Clean Air Act.

In regards to my first conclusion, that development since 2004 strengthens our original conclusion that the program is technically feasible and cost effective. I mentioned three developments since May of 2007, since the last waiver hearing, and the ones that I referred to are higher gasoline prices, a market shift to cleaner cars, and new Federal fuel economy standards.

The first development of fuel prices, as we all know, fuel prices have undergone a dramatic and permanent structural shift since 2004. CARB's 2004 analysis assumed gas would only cost $1.74 a gallon and about $25 a barrel of oil for the next 15 years. Despite the recent decline due to the global recession, oil prices are expected to rebound to over $100 a barrel over the next several years.

This is because of oil market fundamentals.

The era of cheap, easy, accessible oil is over. The world's remaining reserves are expensive to extract and are mostly in volatile, unstable regions of the world.

Most experts agree, including those at the U.S. DOE, as well as General Motors' own fuel price forecasters, believe that as demand rebounds, so will oil prices. And General Motors' restructuring plans estimates national gasoline prices of $4 a gallon by 2014. Clearly, the higher fuel prices will enhance the program's cost effectiveness by increasing the expected fuel saving.

In regard to the second development, the market shift to cleaner cars has the effect of reducing greenhouse gas emission at zero regulatory cost. Higher fuel prices have led to a rapid shift in market segments, in particular away from truck-based SUVs and towards crossover vehicles and other car-based products.

The CARB -- the Air Resources Board 2004 technical analysis assumed continuation of the then-prevailing vehicle sales mix. In this case, I'm

talking about the distribution of vehicle sizes within the passenger car and light truck classes. However, since then, due to changing consumer preferences, higher fuel prices, the sales mix has dramatically changed, resulting in lower fleet-wide greenhouse gas emissions at no regulatorily driven cost to the manufacturers.

The shift to cleaner vehicles is also demonstrated in the recent business plans submitted to Congress and the U.S. Treasury by General Motors, Ford, and Chrysler. These plans make it clear that General Motors and Ford are planning to significantly raise their fuel economy levels. And again, since these business plans are either market driven or in part driven by Federal fuel economy standards, the California program is resulting in little or potentially no additional regulatory cost to these companies in some of the years of compliance for the program.

The third development, higher fuel economy standards reduce costs attributable to the California standards. Although greenhouse gas and fuel economy

standards are clearly different and distinguishable programs, technology overlap does exist for some of these technologies. In particular, key technologies listed in the Air Resources Board original staff report and also presented this morning to comply with greenhouse standards, there are overlap between those forecasted by the NHTSA staff as being adopted to meet higher fuel economy standards.

Consequently, the baseline vehicle technology characteristics that ARB developed for cost assessment purposes in 2004 are too conservative. And additional technology required by the CARB standards is substantially less, and therefore, the cost is essentially less than what the staff originally estimated.

Moving on to my second conclusion about lead time. My second overall conclusion is that the automakers can comply with the initial years of the California standards. In particular, I analyzed model year 2009 to 2011. Therefore, our analysis shows that there is no impact of the March 6, 2008, waiver denial on the technical feasibility of

implementing the program starting in model year 2009.

Based on our analysis using EPA's fuel economy trends data, we conclude that on an overall market basis, it is clear the auto industry can comply with the California program in model years 2009 through 2011. In fact, the auto industry will likely exceed the program requirements for the first 2 years, allowing them to bank credits for future compliance.

In conclusion, EPA has only one choice, and that's to grant California's waiver request without delay. There is clearly no technical basis to deny the waiver under Section 209(b) as inconsistent with Section 202(a).

Thank you for your attention.

MR. SIMON: Thank you.

Mr. Kliesch, please?

MR. KLIESCH: Thank you, Mr. Simon, members of the panel. Thanks for having us here today.

We will be submitting this testimony in written form, along with accompanying materials.

My name is Jim Kliesch. I'm here today on

behalf of the Union of Concerned Scientists and our more than 250,000 scientist and citizen members. UCS is a leading science-based nonprofit organization working on environmental solutions.

UCS strongly supports an unconditional granting of the California waiver to allow it and any other State that adopts California regulations to implement State clean car standards. Doing so will set up one single set of standards that will help curb the global warming impact of cars and light trucks and save consumers money.

In order to avoid the most dangerous effects of climate change, we must pursue immediate and aggressive policies to reduce global warming pollution. Today is a watershed moment in the fight against global warming. I urge you to allow California and other States to adopt clean car standards.

Between 2009 and 2016, the State clean car standards will achieve a 30 percent average reduction in greenhouse gas emissions from new vehicles. UCS analysis finds that technologies exist today to build

safe and affordable vehicles that meet or exceed California's clean car global warming pollution standard.

Numerous models on the road today already surpass the 2009 and 2010 State clean car requirements. Let me make that clear because there was some information presented earlier today that seemed to imply that this was going to make life difficult for manufacturers of large trucks.

Again, numerous models on the road today already will meet the 2009 and 2010 clean car standards, and that ranges from a whole host of compact cars to a number of mid-sized cars, including version of the Malibu, the Ford Fusion, the Saturn Aura, the Toyota Camry, SUVs like the Honda Pilot or Jeep Grand Cherokee or Jeep Liberty, Toyota Highlander, Saturn Vue.

Even full-sized pickups like the 8-cylinder 4.7 liter version of the Ford F-150, an incredibly popular, in fact, best-selling vehicle in the country, or the Chevy Silverado, the GMC Sierra, Toyota Tundra pickup truck. All of these vehicles

will meet 2009 and 2010 State clean car requirements.

In the coming years, clean car standards will ensure that other models are made more climate friendly through application of better engines and transmissions, improved air conditioning systems and other accessories, high-strength, light-weight materials, improved aerodynamics, and even alternative fuels, such as natural gas or cellulosic ethanol.

These design components are not new-fangled or untested technologies. We're not even talking about hybrid technology. In fact, these off-the-shelf technologies can be found piecemeal in hundreds of models on the road today.

By combining these technologies, automakers can achieve significant reductions in global warming pollution. For example, pairing a turbocharger with the gasoline direct injection engine enables automakers to downsize an engine, making it more fuel efficient, while providing the same performance to the consumer. Pair that technology with the more efficient five- or six-speed automatic transmission,

and additional fuel savings and greenhouse gas emissions reductions can be accrued.

Some automakers have already announced plans to deploy this approach broadly across their fleets. Ford, for example, will release its EcoBoost engine design this year in a number of models, including the Taurus, and has announced plans to double four-cylinder engine volume and provide the four-cylinder option for every car and crossover they make by 2013.

In the words of a Ford Group VP of global product development, "We're all about the smaller displacement as a way to drive significant fuel economy without sacrificing performance."

State clean car regulations will help ensure that automakers continue such plans in the coming years. Note the technologies I'm referring to pay for themselves in a short period of time through the fuel savings they provide. In fact, because most vehicles are purchased through loans and paid for on a monthly basis, technology costs are actually offset immediately through monthly fuel savings.

Over the past 6 years, my organization has shown, through the UCS Guardian and Vanguard vehicle designs, how cost-effective packages of technologies can be used in vehicles of all sizes and types to provide the environment with global warming benefits, provide consumer savings at the pump, and provide automakers with fuel-efficient products better suited for today's competitive market.

Although the claims of UCS engineers were disparaged by automakers at the time, it should be noted that, today, those very automakers are employing as corporate strategy the approaches recommended by my organization's engineers.

UCS recently updated its assessment of the cost of vehicle technologies and determined that the automakers could meet State clean car requirements by applying technologies that pay for themselves in just 2 to 4 years. For example, the minivan that features fuel-efficient conventional technologies, along with improvements to minimize the global warming impact of its air conditioning system, could reach its State clean car target level at a model cost of

approximately $700.

Assuming a gasoline price of $2.50 a gallon, this technology would pay for itself in under 3 years and further provide its owner nearly $1,800 through additional fuel savings over the life of the vehicle, all while cutting the vehicle's global warming pollution by about 20 percent.

Again, by using technologies already on the road today, the industry can safely and affordably build the cars and trucks that meet all of our passenger carrying, load hauling, and performance needs, but that have a much smaller environmental footprint.

While UCS strongly supports passage of economy-wide climate legislation and adoption of Federal greenhouse gas vehicle standards, it is essential that California and any Section 177 State that adopts California regulations retain the right to set higher standards under the Clean Air Act. Doing otherwise would punish California for its leadership on public health and pollution standards.

California has been at the vanguard of

clean air policy since before the implementation of the Clean Air Act. The authority of California to set its own regulations and for other States to adopt them has allowed many life-saving regulations to be implemented over the years.

California's vehicle regulations are a key reason that we have hybrids on the road today and a key reason that automobile smog emissions have been dramatically reduced. Let California be a leader, and we will all see the benefits.

Thank you.

MR. SIMON: Thank you.

Dr. Cooper, please?

DR. COOPER: Thank you, Mr. Simon.

We greatly appreciate the opportunity to appear before the agency today. The Consumer Federation of America is a federation of 300 State and local groups. We have been active in supporting the clean cars program in California, Arizona, New Mexico, Vermont, and Florida.

We urge the Environmental Protection Agency to grant California's request for a Clean Air Act

waiver to regulate greenhouse gases for light duty vehicles because we believe it is critically important to securing America's environmental and energy future.

There is a direct relationship between greenhouse gas emissions and increased fuel efficiency. Policymakers know that. Scientists know it. And we would be fools if we didn't recognize that reducing greenhouse gas emissions and gasoline consumption are good for the environment, good for national security, and good for consumers.

The public wants cleaner, more fuel-efficient cars. The Nation needs cleaner, more fuel-efficient cars. And the only way to get the cars we need and want is to have regulation push the industry to deliver those cars.

Preserving the authority of California to lead the other States in the right direction and prod the Federal Government to do the right thing is essential to accomplishing the ultimate goal of reducing emissions and consumption as quickly as possible.

In fact, consumers don't only want more fuel-efficient cars, when we ask them, they tell us that they want their next purchase car to get approximately 30 miles per gallon. We've been asking that question for a number of years -- when gasoline was $4 a gallon, when gasoline was $2 a gallon -- and we get the same answer. They want 30 mpg cars.

And they want them in spite of the fact that those cars are not available in any great number in the showrooms of the American auto industry. In fact, the lack of available vehicles to meet the needs and wants of consumers is the central problem that regulation can address.

Whereas about half of the respondents to our survey say they hope, want their next car to get 30 miles per gallon, only 2 percent of the models manufactured by automakers actually get 30 miles per gallon or more.

On the other hand, automaker advertising emphasizes power, size, and luxury. The showrooms are stuffed with a wide range of choices for fuel-inefficient vehicles, and auto salesmen push the gas

guzzlers as best they can because they think they make more money on those. And they used to, but they don't anymore.

To overcome consumer resistance, rather than change their offerings, the auto manufacturers now discount their gas guzzlers heavy to move that crappy metal. When consumers can't find the cars they want, they settle for the cars that are out there, and the Nation and consumers suffer.

Our analysis of survey data and sales data shows that this process, this shift in consumer demand began 4, 5, even 6 years ago -- plenty of time for automakers to have shifted in the right direction. Of course, they chose not to adjust, and in fact, like any dinosaur that fails to adapt, they now face extinction.

This morning, you heard a remarkable display of what I call "dinosaur thinking" on demand, on profit, on safety, and on policy. And I want to briefly go through exactly how dangerous the auto industry's thinking is. Let's start with demand.

The suggestion that the California clean

cars program will suddenly cause automakers to misunderestimate consumer demand is ludicrous. They've been doing that for the better part of a decade.

You were told this morning that gasoline prices are down, and so they expect SUV and truck demand to be up. But it's not. Those are the things that are sitting on their lots. They simply haven't noticed that there has been the fundamental shift in demand. They are dinosaurs hoping that the climate will change back.

On profits, you heard $5,000 per truck as profit. Well, that was ancient history. That's not reality today. You heard about massive discounts. So, in fact, the data clearly show that they lose money on those big vehicles because they have to discount them so heavily to move that crappy metal.

In fact, sales of more fuel-efficient cars, profits on more fuel-efficient cars have held up much better than the profits and sales of the big gas guzzlers. They are dinosaurs hoping that the climate will change back.

The logic of their safety argument is really quite remarkable. First, they tell you we won't be able to sell these little cars. People will run across the border and buy in the noncompliant States. Then they say, well, we'll sell a bunch of these little cars, and people will get killed.

Can't have it both ways. In point of fact, a central point here is that technology has attenuated the relationship between safety and size. You can build small cars that are just as safe as big cars.

And ironically, of course, they say every time you put a small car on the road, you're increasing risk. It turns out, every time you take a big car off the road, you're decreasing risk.

It's the bimodal distribution that has created the problem, and the American public is actually fixing that problem so that there is no logic to their safety argument. Their dinosaurs are a little bit confused.

The final point is policy. They say now we're for strong national standards like they

promised us they would fix their trucks in 2002, committing to a 25 percent increase in fuel economy. I guarantee you, the minute you go for a national standard, they won't support a strong one.

So we're convinced that the only way to accomplish the goal of getting fuel economy is to have -- and greenhouse gas emissions is to have a substantial, progressive increase in standards. And that is where the California waiver comes into play.

The Clean Air Act waiver process is an example of American federalism at its best. The waiver has its roots in the persistent failure of the Federal Government to protect the public in setting environmental standards. Allowing the Nation's largest State to take action against to solve environmental problems, allowing other States to adopt identical standards has not only produced the highest standard in the Nation, it has also produced knowledge and support for increase these standards.

It's this process of having our Federal Government and our State governments thinking about a problem with the authority to address the problem

that gives us our dynamic process to get to the right answer. The Feds may miss the answer? Well, then California may get it right. Other States will chime in, and the process is a dynamic process achieving our ultimate goal.

And so, for us, we hear talk about compromises. We hear talk about setting a national standard for next year or a couple years from now. All that may be well and good, but what we must not do is abandon this process of having at least two important large entities thinking about the problem.

So granting this waiver, regardless of what happens on this round, is critical to preserving what is now a process that existed for 40 years of ensuring that the Nation's largest State and the Federal Government are both thinking about this problem, devoting resources with the authority to push either in the right direction.

We urge you to adopt this -- to grant this waiver to preserve that process.

Thank you.

MR. SIMON: Thank you for your testimony.

I greatly appreciate it.

Lena Pons, please?

MS. PONS: Good afternoon. My name is Lena Pons. I'm a policy analyst with Public Citizen's Auto Safety Group.

Public Citizen has worked since 1971 to protect the health and safety of Americans, and foremost among our priorities has been advocating for safe and clean transportation. We appreciate this opportunity to share our thoughts about California's greenhouse gas standards for motor vehicles.

We urge the EPA to grant California's request for a waiver to enforce their standards. I'm going to focus my testimony mainly on the claim that California's greenhouse gas standards will impact -- negatively impact safety.

For decades, the auto industry has argued that increased fuel efficiency standards will degrade safety by encouraging manufacturers to downweight vehicles and, as a result, degrade safety. There are two basic misapprehensions inherent in this argument.

First, history has shown that weight

reduction has been used as a means to achieve fuel economy improvement almost entirely in the heaviest vehicles. And second, the safety impacts of reduced vehicle weight are more complicated than the simple "heavier is safer" perspective that has been popularly espoused by the industry.

Two confounding vehicle trends have not been considered in analyses of fuel economy and safety that focus simply on vehicle weight. The first is growth in the difference between the weight of typical passenger cars and typical light trucks. In 1975, this difference was just 17 pounds. By 2005, the difference had ballooned to over 1,200 pounds.

The second trend is the growth of market share of light trucks, which grew nationwide from less than 10 percent in 1975 to close to 50 percent today. These trends are not addressed by NHTSA's attribute-based standards, and the claim by the automakers that NHTSA's attribute-based system protects safety by preventing automakers from downweighting their vehicles to meet standards has no

basis.

The heavier is safer argument is based on an oversimplification of the interaction between two vehicles in a crash, what is referred to as compatibility. The basic principles of collision dynamics tell us that in a crash between two vehicles, the heavier vehicle wins. That is, that the occupants of the heavier vehicle sustain less severe injuries than those in lighter vehicles.

But motor vehicle crashes are anything but simple collisions. There are several factors in play that determine the crash force as experienced by occupants in multiple vehicle crashes. Attributes related to compatibility include weight, but also size, front-end stiffness, and geometry of the front-end, including the bumper height and the center of force height.

Changing the amount of bumper overlap, for example, by lowering the bumper of larger vehicles can substantially reduce the disproportionate impact felt by an occupant in a passenger car by changing how the crash forces are distributed.

The motor vehicle safety problem posed by incompatibility among vehicles is a real highway safety concern. However, it must be addressed through vehicle safety standards. Public Citizen has long supported and continues to support a compatibility standard for vehicles.

The California program divides the fleet into two segments that are mainly based on functionality -- vehicles that are primarily designed to transport passengers and vehicles that are designed to transport passengers and cargo. This cutoff sufficiently divides the fleet such that manufacturers would not need to resort to aggressive downweighting to meet the California standards.

Another argument that is commonly cited as evidence that there is a safety impact related to fuel economy is the rebound effect, which is the tendency for drivers to respond by the decreased per mile cost of driving by increasing the vehicle miles traveled. The claim that increased vehicle miles traveled will result in greater highway fatalities ignores the significant improvements that have been

made in highway safety over the past 40 years.

Since 1975, the fatality rate in passenger vehicle crashes has dropped 60 percent in passenger cars, and 55 percent in light trucks. In that time, motor vehicles have gotten much safer through widespread application of effective safety technologies such as airbags and improved crash worthiness standards such as that for side impact.

Improvements in driver behavior, such as vastly increased seatbelt use, has increased seatbelt use compliance from less than 20 percent in the 1970s to 83 percent in 2008. Public Citizen, therefore, challenges the claim that the relatively small increase in vehicle miles traveled as a result of increased fuel economy will result in significant increase in the number of highway fatalities.

In making a determination as to whether California should be granted a waiver to enforce its greenhouse gas emission standards, we urge that EPA ignore the distraction of purported safety impacts related to those standards. The bottom line on fuel economy is that the relationship between fuel economy

and safety is much more complicated than the simple linear relationships reported by the industry, and safety need not be an issue.

It is the role of NHTSA to protect motorists by establishing and enforcing safety standards, and any negative safety impacts related to diverse weights are best addressed by NHTSA through a compatibility standard.

Thank you.

MR. SIMON: Thank you very much.

Joanne Ivancic. How's that?

MS. IVANCIC: It's Joanne Ivancic, and I'm the executive director of Advanced Biofuels USA, a nonprofit organization, and its purpose is to promote public understanding, development, and use of advanced biofuels, which are truly sustainable, renewable biofuels.

First, I want to say I have a 30 mile per gallon car. It's a 7-year-old Ford Focus, and we carpooled here in a 12-year-old 30 mile per gallon Sable station wagon that's got almost 200,000 miles on it. So we know the car companies can meet their

consumers' expectations for 30 mile per gallon cars.

I have also submitted written comments, and so my comments today are to supplement those. I want to concentrate my comments on the need to assure fair and complete accounting of emissions created to power vehicles, whether they be coal-fired power plants, gasoline, diesel, biodiesel, or advanced biofuels, whether a waiver is granted to California or if a more strict Federal national standard is developed.

In that regard, from the California testimony, it's clear that the automakers can adapt to stricter standards. Also, though, do not ignore the positive impact that is possible from the development of advanced biofuels or drop-in biofuels or green gasoline.

Thus, even if consumers can't afford to buy new technology cars, if they're going to be driving their cars to 200,000 miles or if they prefer or if they're going to have to buy used cars or if they prefer SUVs or trucks, if they're using advanced biofuels that don't pollute, then we don't even have to be here talking about this.

I have two concerns. One specifically about the California program and then a general comment about fairness in calculating the deleterious effects on the environment of powering vehicles and their accessories -- their air conditioning, heat, sound systems, GPS, mobile offices, and everything else that you power on those cars today.

Our first concern is that all emissions that are generated in the process of producing the power to move a vehicle are inventoried so that climate change policies are based on thorough scientific information. It seems only fair and responsible -- actually, the whole point of having pollution control standards on greenhouse gases to begin with.

For example, climate change mitigation -- again, the goal of pollution control standards -- falls by the wayside if California considers electric cars to produce zero emissions for the purposes of California nonattainment area. While obtaining that extra power that's needed and puts this additional strain on California's resources -- that is, for

electric-powered vehicles or plug-in hybrids -- if that comes from coal-fired power plants built in attainment areas, it will be lost. It won't be counted.

The pollution caused by driving vehicles in a nonattainment area in California must be attributed to those vehicles where they're driven and shouldn't be lost to our calculations of how much pollution is actually being caused by charging those vehicles and moving those vehicles.

Increased pollution caused by electricity production required to power those vehicles, no matter where it takes place, must be factored into the standards for California. California or other States requesting waivers should not be allowed to use some fancy sleight of hand to pretend that electric cars driven in California or these other States somehow magically don't produce pollution.

My general comment stems from my experience with biofuels, particularly advanced biofuels. As you know, the EPA administrator has the responsibility to determine the lifecycle greenhouse

gas emissions for conventional and advanced biofuels and then to compare those to the greenhouse gas of gasoline and diesel.

It's bothersome, don't you think, that not all fuels have to measure their carbon footprints as it's expected for biofuels. It's not only bothersome, but it's shortsighted. It's shortsighted as far as serious mitigation of greenhouse gases goes. We think the playing field should be leveled so all these fuel sources -- solar, wind, natural gas, coal, nuclear, all of them -- also have to calculate and justify their carbon footprint.

From seed to wheel they say when they're talking about biofuels. Well, we can say from mine to motor when we talk about conventional fossil fuels. For example, there is an awful lot of energy that goes into mining and refining uranium for use in nuclear facilities. Not to mention the emissions resulting from the manufacture of the concrete used to expand or build those facilities.

Just as biofuels may have to consider the amount of fertilizer used, the amount of power used

by farm equipment, the fuel used to transport the feedstocks to biorefineries and all the rest of it, in addition to the greenhouse gases their use directly puts into the environment, so other power sources should be required to calculate and justify their carbon footprints in an analogous manner.

It makes sense if we truly want to make energy policy decisions based on science rather than tradition. We're in a new world. If we can nudge, not to say require, auto manufacturers to adjust their technologies to meet greenhouse gas and motor vehicle pollution control standards, why not put the same kind of pressure on fuel suppliers?

British Petroleum said that they were beyond petroleum. They should be here, too, talking about how their changes in their technologies might help California and the rest of these States meet the standards that they are trying to establish.

MR. SIMON: Thank you very much.

Mr. Kozak?

MR. KOZAK: Thank you.

I'm Bob Kozak, president of Atlantic

Biomass Conversions in Frederick, Maryland. I come from a background in inspection maintenance, and I got out of inspection maintenance and got into biofuels thinking I would never have to attend another EPA hearing as long as I lived. Well, I guess I was wrong on that regard. I will be mailing a printed copy after this.

Evidence presented today shows that the State of California most likely meets the requirements and should, therefore, be granted the requested waiver by EPA. However, I think an equally good argument on extraordinary conditions could be made for my State of Maryland, which is going to lose a tremendous amount of land if the sea level does rise. But that would take care of EPA's problem with the Chesapeake Bay because we wouldn't have Chesapeake Bay anymore.

But generally, it seems I think it would support that the evidence is there that EPA should grant the waiver. However, the evidence presented today also shows that the motor vehicle industry has the technologies available to meet increased fuel

economy standards nationwide.

So, to me, it would seem that the best course of action to reduce greenhouse gases would be for EPA to use the authority the U.S. Supreme Court has clearly stated they have to issue a national CO2 standard and forgo the waiver issue. Why don't we just get to a national standard? Rather than having just 45, 50 percent of the vehicles covered, why don't we go all the way to 100?

However, no matter what course of action EPA takes, it is very important that all State motor vehicle programs properly account for all the CO2 produced related to motor vehicles traveled. This is especially important since new vehicle technologies, including plug-in hybrids and advanced biofuels produced from low-nutrient input nonfood biomass, will be coming to market in the near future.

Specifically, there are three issues I'd like to address. Please consider these in the category of potential unintended consequences. First one is the CO2 emissions from plug-in hybrid vehicles and electric vehicles. Joanne covered a lot of this.

So I'll be brief.

Again, it is very important that the CO2 emissions from these vehicles, and we're talking about plug-in hybrids or electric vehicles, that all the CO2 there must be properly accounted for in the State emission inventories. More important, they must be apportioned to and, therefore, controlled at their actual place of use.

And again, this gets into the concept of California could claim that the plug-in hybrids are emission free for the portion of the driving that is used for electricity, while that electricity is produced elsewhere. Sort of the worst-case scenario comes up is a power plant in the Four Corners on an Indian reservation where, if I recall, they are not subject to many EPA regulations.

And the CO2 produced there is going to be lost to the emission inventories, even though it still is causing greenhouse gases. I think that is something very important to look.

Specifically, in looking at the CO2 regulation waiver, it should include the following.

All electricity and CO2 generated from coal or other nonrenewable fuel power plants used to charge plug-in hybrids or electric-only vehicles must be accounted for in the Clean Air Act mandated State emission inventories.

And the quantities of electricity and CO2 use for charging batteries must include the energy losses and the CO2 production that goes with it used for charging those batteries. And that includes the energy lost in electrical production, the step-up/step-down transformers, and long-range transmission.

According to data from the National Academy of Sciences, approximately 60 percent of the energy used in electrical production is lost before it comes out of our sockets. So if we're talking about total energy of a plug-in hybrid or electric, that all, I think, has to be accounted for because that is the CO2 footprint of that vehicle.

Again, calculations must be uniform for all States involved in this. Again, the plug-in hybrid battery charging has to -- I think it has to be

apportioned to the endpoint of use State. I think that's the easiest and simplest way to account for it.

In other words, if it's California is doing this or Massachusetts or Maryland, all those vehicles in there that fall in these categories, the emissions have to be apportioned to their State inventories and they have to be dealt with there.

Next one is uniform calculation of advanced biofuel emissions. Joanne went over most of that. I don't have much to add, except for the fact that these have to be uniform for States that are involved in the waiver program and are not. I think it's very important because that way if there are any claims coming out by manufacturers or whoever, the consumer will have the same kind of information. You don't want a situation where marketing claims and false science takes over.

And again, the idea of biofuels, we know that corn ethanol has a problem with CO2. But as we move into the advanced biofuels from grasses, ag and forest residues, and instead of ethanol, getting into

the green gasolines that have similar BTU contents as gasoline, I think all of those have to be accounted for.

Finally, the last thing is, and I know when I mention this, people are going to wonder why I'm saying it. But if you bear with me, I think I can make a case.

Use of cap and trade in this context. The recently released Fiscal Year 2009 Federal budget proposal includes a line item of income from the sale of permits by the Federal Government to sources that emit CO2 emissions above what I presume to be some future EPA-established level.

Without knowing the details of the complete proposal, which is being called a cap and trade program, I assume that these permits will be limited to stationary sources, which, of course, are primarily coal- or gas-fired electrical production plants.

While at first this program would not seem to be a reasonable topic at a motor vehicle CO2 waiver hearing, it is for two reasons. First, the

use of a cap and trade system for one part of the CO2 emission inventory, stationary sources, while standard Clean Air Act approach of an emissions performance standard for another part of the CO2 emissions inventory, mobile sources, has a very real possibility of creating unequal control burdens and costs.

Specifically, motor vehicle CO2 standards would require motor vehicle manufacturers to immediately engineer fleet-wide emission reductions or leave the market, while the cap and trade program would allow the electrical production industry to continue emitting CO2 at their current levels. And in nonregulated States, there would be no prohibitions on passing the cost of the purchase of the EPA permits along to customers.

Not only is this unfair, but a large portion of CO2 emissions would not be reduced in the short and medium term.

Second, as discussed earlier, the introduction of plug-in hybrids will transfer some transportation's CO2 emissions from tailpipe to the

smokestack. This could create a significant regulatory conundrum for State and Federal agencies and the opportunity for gaming the system by vehicle manufacturers and electrical producers.

For instance, the presence of a stationary source cap and trade program could allow moving plug-in hybrid motor vehicle CO2 emissions that could have been controlled to an uncontrolled cap and traded coal-fired power plant. Furthermore, a really good capologist -- and I think it's going to move beyond the NFL once these cap and trade programs get going -- could probably find a way to claim new CO2 credits on the basis of producing transportation power for plug-in hybrids that ostensibly were replacing higher CO2-emitting vehicles.

And I'm sure anybody who's been involved in emission programs have seen the gaming of the systems that goes on. And I think there is a bad situation that we could be getting into.

Therefore, I strongly recommend EPA, for the purpose of actually reducing greenhouse gas emissions that EPA retain the performance-based

emission standards established by the Clean Air Act for both stationary and mobile sources. The approach was very successful in producing tremendous reductions in smog-producing emissions. In the words of the old adage, "If it ain't broke, don't fix it."

The Clean Air Act established process worked fine for hydrocarbon and carbon monoxide emissions and I think would work fine for CO2 as well.

Thank you.

MR. SIMON: Thank you very much for your testimony.

Any --

[No response.]

MR. SIMON: We appreciate you all sticking around this afternoon and look forward to working with you as we move forward. Thank you.

I'd like to call up now Barbara Weinstein, Jesse Prentice-Dunn, Richard Ball, and Alicia Clarke.

Okay. Barbara Weinstein, please, why don't you start us off?

MS. WEINSTEIN: Good afternoon. My name is

Barbara Weinstein. I'm the legislative director at the Religious Action Center of Reformed Judaism.

The center is the Washington office of the Union for Reformed Judaism, whose more than 900 congregations across North America, including nearly about 100 of which are in California, encompass a million and a half reformed Jews and the Central Conference of American Rabbis, whose membership includes more than 1,800 reformed rabbis.

Thank you for the opportunity to testify today in support of the California waiver request to set stronger tailpipe emission standards for greenhouse gases and other vehicular pollutants. The actions of California and 13 other States and the District of Columbia, if allowed to proceed, will benefit our environment, our health, and our security.

In Jewish texts and teachings, we are instructed that while God created the Earth, it's the responsibility of man and woman to care for that creation. The mandate for environmental stewardship is at the core of our movement's decades of work to

change both policies and practices that affect our environment and all the species, including humans, which inhabit and rely on our natural world.

This value leads directly to our support for the California Air Resources Board's waiver of preemption for greenhouse gas emissions regulations for new motor vehicles. Last year, the Union for Reformed Judaism and several of our partner institutions in the Jewish community proudly joined an amicus brief on behalf of the State in California v. EPA.

That brief was submitted jointly with members of the scientific community and demonstrates our common commitment to science-based solutions to problems that speak to us as people of faith. The EPA's rejection of the waiver request after a 2-year delay and in spite of recommendations and support of the waiver from its own scientists ignores the realities we face today.

Unchecked greenhouse gases and other tailpipe emissions are a clear and major threat to current and future health. Rising sea levels,

extended droughts, extreme weather conditions, and the corresponding harmful impacts on humanity and other forms of life are indisputable. No region of the country or the world is immune to the effects of our changing climate.

California, with the largest agriculturally based economy of any State in the Nation and the most populous coastal area, is especially vulnerable to the devastation of unchecked climate change. In addition, California residents have suffered from polluted air for decades, despite progress under the Clean Air Act.

The act states that the waiver for California to set stronger emission standards can be denied if it is found that the State does not need such standards to meet compelling and extraordinary conditions. Experts have made abundantly clear that the extraordinary concerns about air quality and climate change, both for California and the world, are presented by unchecked vehicular emissions. Yet we have lacked the political will at the Federal level to face these challenges.

Instead, it is the States that have taken the lead. California, with its diverse ecology, coastal population, and economy immersed in agriculture, sought a 30 percent reduction in tailpipe emissions from cars and light trucks by 2016. Thirteen States and the District followed suit and adopted the same standard.

Together, these States and the District account for nearly 40 percent of the U.S. auto market. It is, of course, that market which is responsible for billions of tons of carbon dioxide emissions annually, pumping more carbon dioxide into the atmosphere than many large nations, including Germany and Brazil.

The window for action against climate change is rapidly closing. Experts attest we'll need 80 percent carbon emissions reductions by 2050 to avoid the most dire future effects of climate change and begin to repair the damage already done. We cannot possibly reach this goal without stronger standards for the transportation sector and EPA's support for such standards.

We care about this issue not just for the sake of the environment itself, but because we know from experience that the effects of environmental degradation are felt most acutely among those who lack the resources to effectively respond.

After the strength of Hurricane Katrina nearly tripled as it spun over the warmer waters of the Gulf coast, its impact upon making landfall was devastating. Those who could afford to leave did so in most cases, and those who were left behind were disproportionately poor and vulnerable populations. The official death toll exceeded 1,000, and this was here, in the wealthiest nation on Earth.

As people of faith, our responsibility lies in caring for the least among us. Developing nations, children, minorities, communities of color -- they will be most profoundly impacted by climate change and least able to adapt.

The most vulnerable developing nations around the world who have contributed the least to causing climate change will be the first to suffer its effects. They will be displaced by flooding,

left hungry without a source of income when crops fail, face the threat of new diseases without the health infrastructure to respond.

But with our financial, technological, and scientific resources and the knowledge that we are the nation most responsible for climate change, we are particularly accountable and able to do all we can to mitigate its impacts by cutting our emissions as much and as quickly as possible.

As the world prepares for the U.N. framework convention on climate change in Copenhagen in this December, the U.S. again has a chance to take the lead in addressing this profound challenge. We can illuminate a path forward for nations to develop in a more sustainable way, with States like California at the helm.

The need to protect our environment for its own sake and for the sake of humanity is undeniable. The imperative to protect our health is obvious. The morality of helping those in need is clear. But I will close with one more reason to grant the California waiver.

More efficient cars are essential to ensure our national security in the years to come. By reducing our dependence on fossil fuels, we reduce the influence of oil-rich nations that, in too many cases, have interests that are counter or even hostile to our own.

We welcome the EPA's review of the waiver request and this opportunity to share our views. Our Nation can again become a world leader developing the technology that will make our people and our environment stronger and healthier in a multitude of ways. But it will not happen if we obstruct innovation, and it will not happen if efforts to reduce greenhouse gas emissions are blocked.

This waiver is a critical step forward for this administration, honoring its promise to protect our Nation and our environment and restore our standing in the world.

Thank you.

MR. SIMON: Thank you.

Jesse Prentice-Dunn, please?

MR. PRENTICE-DUNN: Thank you.

My name is Jesse Prentice-Dunn. I'm an associate Washington representative for global warming and energy with the Sierra Club here in Washington, D.C.

The Sierra Club is the Nation's oldest and largest environmental organization, with more than 1.3 million members and supporters across the Nation. Earlier today, Ann Mesnikoff showed you more than 1,000 of them urging the EPA to grant the waiver necessary to implement the clean car standards.

Now, I moved to Washington, D.C., from North Carolina, where in 2007 I witnessed one of the worst droughts in that State's history. River levels hit 110-year lows, and the State's agricultural industry took a huge hit -- low crop yields and irrigation shortages.

Entering its third year under drought conditions, California is facing an even worse situation. With diminishing snow pack, low precipitation, and little reservoir storage, 2009 could be the worst drought year in California's history.

According to the Intergovernmental Panel on Climate Change, global warming not only increases the severity of droughts, it will increase their frequency. Furthermore, global warming threatens to saddle California with a range of harmful effects, from severe wildfires to sea level rise.

It is clear that California needs to reduce greenhouse gas emissions, including those from motor vehicles. The California Pavley standards in question today are not only necessary, they are technically and economically feasible. Critics say that automakers can't meet California's stringent standards and that consumers will face reduced choices when buying a new vehicle. And automakers have spent millions fighting these standards in court.

However, from the automakers' recent submissions to Congress and from the cars that they produce today, it is clear that automakers cannot only produce cleaner cars in the future, they are doing so already.

With the help of the American Council for

an Energy Efficient Economy, the Sierra Club has created a virtual clean car show, which highlights 12 models of cars, trucks, SUVs, and crossovers that are in production today that would meet California's clean car standards. Hopefully, that will be up on the screen in a second.

While all 12 models that we have in this virtual clean car show would meet the 2009 California standards, most of them would meet the standards in later years, all the way up to 2016. Showcasing a range of models, the Sierra Club's car show demonstrates that consumers would be able to choose from a full range of vehicles from a Ford Focus sedan all the way up to a GMC Yukon XL. There is a pretty little red Chevy Cobalt.

It's available on our Web site, and it allows visitors to click on an image of a vehicle and see information, including the vehicle's manufacturer, transmission type, number of cylinders, fuel economy, its greenhouse gas emissions, and the year of Pavley compliance. Background information on the car standards are also available.

Now some argue that California's proposed standards would disproportionately affect domestic automakers. However, each of the Detroit three already produces vehicles that would comply with California standards, including popular models such as the Ford F-150, Chrysler Town and Country, and the Chevrolet Cobalt you see up there. Indeed, 9 of the 12 models that we display are produced by domestic manufacturers.

Additionally, while hybrids and electric vehicles will certainly reduce fleet greenhouse gas emissions in the future, they are not necessary to meet California standards. Only 2 of the 12 vehicles that we profile are hybrids, both of which are American made.

Automakers have a range of cost-effective technologies already on the shelf that can make vehicles even cleaner. Yes, you've heard those multiple times today. I won't go through the valve timings and direct injections and all.

Earlier today, Jim Kliesch mentioned the Union of Concerned Scientists Vanguard update that

they produced in 2009, which estimated that by implementing a suite of already-available technologies and assuming a gas price of $2.50, vehicles across the size spectrum would give consumers roughly $2,000 in benefits with a payback time of 2 to 3 years.

So, in conclusion, the California clean car standards are technically and economically feasible. Automakers, including the Detroit three, are already making a range of vehicles from cars to pickup trucks that would meet these proposed standards.

With compliant vehicles in production and with even more cost-effective technologies available to reduce emissions in the future, it is clear that automakers can meet California standards in 2009 and beyond. I urge you to grant California the necessary waiver to implement its clean car standards immediately.

Thank you.

MR. SIMON: Thank you.

I'd like to hear next from Richard Ball, please.

DR. BALL: Yes. My name is Richard Ball. I've lived in northern Virginia for the last 35 years. I'm a volunteer with the Virginia chapter of the Sierra Club, and I serve as energy issues chair for the chapter.

I'm here because our chapter thinks that EPA has a responsibility to grant the California clean car waiver and to let States take the lead in reducing our global warming emissions from vehicles.

Now, our chapter, of course, fully supports the policy and arguments made by Jesse Prentice-Dunn. What I want to do today is add to them somewhat from the perspective of Virginia and also as a scientist who's worked on global climate change impacts.

In contrast to other jurisdictions in our area, like Maryland and D.C. in particular, Virginia has not adopted the California program. And we in Virginia, and our chapter in particular, very much wish that Virginia would do that. We'd like to experience cleaner air quality, and our air quality is strongly affected by automotive emissions.

And we also have great concern over the

natural amenities and ecological values of Virginia, in particular, the Chesapeake Bay and other ocean, coastal, and estuarine resources that are gravely threatened by warming and sea level rise.

Let me just summarize a few specific arguments, additional arguments in favor of approving the California waiver. Virginia needs to do its part in reducing auto emissions of both criteria pollutants and greenhouse gases.

Now at the end of 2008, the governor of Virginia's Commission on Climate Change made a number of findings about the impacts and recommendations for action, but in spite of that, our State legislature -- our General Assembly, that is -- stonewalled all substantial efforts to improve auto standards or any other global warming mitigation measures.

So part of our concern is please help us push Virginia into doing what it should be doing to set higher standards. And the California standards would serve as an example and a way to force improvements in auto technology from which all States will benefit.

Second point I want to make is that climate impacts may be much worse than is commonly predicted. I served as a lead author on producing the first and second IPCC Working Group II report on climate impacts, and I've been following it since then. So I'm very much aware that conventional predictions of potential impacts may underestimate their magnitude, and I want to mention just one example of that.

People following the scientific literature are quite aware that since the last IPCC report in 2007, there have been a number of scientists have come out and tend to agree that sea level rise is much likely to be much greater than the estimated range of model predictions which were cited in the IPCC report, which, in fairness, omitted the rapid dynamical ice sheet changes. They weren't able to deal with that.

So these new processes that we're now observing in Greenland and Antarctica, such as lubrication of the bottom of glaciers by melt water, they may lead to much greater climate change than is ordinarily -- certainly than the less than one meter

predicted in the IPCC report. So things could be worse.

The second point I'd like to make is that the California waiver will have a large impact. Not only will the 13 States represent 40 percent of U.S. auto emissions, but we feel the California waiver would reduce U.S. emissions by setting an example for other States and by forcing automotive technology changes that ultimately could be available to other States and other nations. Even though the technology may be available to meet the immediate standards, in the future, we're saying it will be technology forcing.

The second point I'd like to make is that the California waiver would be an important complement if we eventually have a cap and trade policy. A cap and trade policy in itself may not be sufficient to induce behavior among automobile buyers and drivers. We may need a supplementary approach, and the regulatory technology forcing approach that would be driven by the California waiver would be a very good start on that process.

The next point is that the California waiver is the shortest route to climate action. I mean, we think it would be great if EPA were to apply the same standards as proposed by California to the entire Nation on the same time schedule. But the question is, can EPA really do that in terms of a practical schedule of regulatory rule-making or, if even longer case, if we had to pursue the alternative route of obtaining new authority from Congress?

If EPA approves the waiver, the California standards are ready to be implemented, as several people have discussed here, without further regulatory delay, and that's very important.

The next point is that we support the arguments that have been made by California in favor of granting the waiver. In addition, based upon my own experience living in California for 17 years, where I was active particularly in trying to seek coastal protection and which led eventually to the California Coastal Commission, I'd like to make the following additional point about the impacts on California.

Global warming poses a serious compelling and extraordinary threat to California's environment, economy, and public health. I lived in Los Angeles for 10 years. Los Angeles basin is uniquely vulnerable to air quality problems, and global climate change will -- increasing temperatures are predicted to worsen air quality problems, in and of themselves.

It will threaten water supplies, and it's already been mentioned about the drought problems in California that they're already experiencing. I believe Federal agencies are already going to cut off water for irrigation, for agricultural irrigation this spring.

It will damage ecological systems, including the fragile Sierra Nevada Mountains, the high and low deserts, and the extensive ocean, coastal, and estuarine resources. It will compromise the ecological and scenic values of a large number of national and State parks, national monuments, and wilderness areas.

So while other States may be significantly

affected, California's unique environment and ecosystems are especially sensitive to many of the impacts of global warming and sea level rise.

So, in conclusion, given the compelling need to cut global warming pollution and the extraordinary consequences of failing to do so, we believe EPA should immediately allow California and the other States to implement global warming emission standards for cars and light trucks.

Thank you.

MR. SIMON: Thank you for your testimony, Dr. Ball.

Alicia Clarke, please?

MS. CLARKE: Good afternoon.

My name is Alicia Clarke, and I am a 20-year-old political science and geography major at Rutgers University in New Brunswick, New Jersey. I am before you today representing New Jersey PIRG and the rest of the PIRG student chapters at colleges across the country.

My goal today is to stress to you the importance of passing California's clean car waiver

by highlighting its benefits, discussing why it is important in the fight against global warming, and why, because of that, this decision is so important to me and my generation.

The stricter regulations in CO2 emissions that would result from this waiver would have a significant impact on all States who are seeking to make their car emission laws stricter. If these stricter regulations were passed in all 50 States this year, by the year 2020, the amount of global warming pollution that would be prevented would be equivalent to taking all cars and light trucks off the road for a full year.

Clearly, it is time to rethink how we construct our vehicles and begin building the auto industry of the future. This revamped industry will prove to be an asset to the United States by reducing our dependence on foreign oil, saving consumers billions of dollars on gasoline, and laying a foundation for the comprehensive global warming and clean energy solution that President Obama is calling for.

It is crucial for me to note that the passing of this waiver is incredibly important to my generation because it is a direct stand against global warming, the greatest enemy and threat to our future that my generation will ever face.

The effects of global warming are accelerating and have become impossible to ignore. The polar icecaps are melting. Storms are strengthening, and the continental shorelines are under attack from rising sea levels.

Being that I am a resident of a coastal State, the threat of rising sea levels is a constant reminder of the fragile nature of our environment and how, if we are negligent in our responsibility to protect our environment, we will suffer the consequences greatly.

At Rutgers, we are keenly aware of the dilemma that we are faced with and are willing to fight our hardest to solve it. Over the past few years, NJ PIRG has put an emphasis on educating the students at Rutgers and the community around us on the threat of global warming.

This semester, our global warming solutions campaign has been working hard to give a voice to concerned students. Within the last few weeks, we have achieved over 2,500 grassroots actions, ranging from signatures on a Valentine's Day card to our congressman, urging him to help us, to be our partner in the fight against global warming, and student photos with a cardboard cutout of our congressman in a Captain Planet costume, urging him to be a champion for the cause in Congress.

This past weekend, I joined various PIRG student chapters and about 12,000 concerned young people at the Power Shift conference on global warming solutions. On Monday, I personally lobbied Congressman Pallone and a staff member for Senator Menendez, asking them to support our initiatives and urging them to be champions for the cause.

We at NJ PIRG and the rest of the PIRGs around the country are doing our part. Now it is your turn to do yours.

Now is the time to hold companies responsible for their negligent practices that pour

pollution into our skies and waterways. Now is the time to pass legislation to restrict CO2 emissions. Now is the time to follow President Obama's call to take this threat in our environment seriously.

By passing the California clean car waiver, you will be doing your part to ensure that my generation's future, the future of your children and grandchildren, will hold the same promise that yours did when you were young and dreamt of the glorious and prosperous future that laid before you. Please, give me and my generation a chance to dream as well.

Thank you.

MR. SIMON: Thank you. And thank you all for your testimony and advocacy today. It's been very helpful.

Any questions?

[No response.]

MR. SIMON: Thank you very much.

I'd like to call up now Ivy Main, Megan Fletcher, Christina Marie Yagjian, and Alan Ford.

Why don't we start with Ms. Main?

MS. MAIN: Thank you.

My name is Ivy Main, and I was a lawyer with EPA back in the 1980s when global warming was first just beginning to be widely understood.

These days, I'm an activist at the State and local level with the Sierra Club in Virginia, but I'm here today just on my own behalf. And I was here 2 years ago, and so I am particularly delighted that we all get to do this do-over.

I would like to speak to the issue of California's need to prove that global warming poses a serious compelling and extraordinary and threat to the State's environment, economy, and public health. As a coastal State, California does, indeed, face an extraordinary risk, a risk both greater than and different from that faced by inland States.

I've lived most of my life in coastal States. I was born in California, grew up mostly on the north shore of Long Island, graduated from high school in Washington State, and have lived in Virginia for most of my adult life.

And every summer, I have spent a few weeks on the coast of Maine in a little wooden cottage that

was bought more than 100 years ago by my great-grandfather, the American historian Frederick Jackson Turner, the year before the birth of his first grandchild, my father.

And I would love to be able to drop in here something prescient for my great-grandfather, who studied and wrote about the enormous changes that Western civilization wrought on the landscape of America during our pioneering years. But a mind shaped in the 19th century could never have imagined that the progress of the Industrial Revolution would eventually lead us to the brink of ecological disaster and threaten, among other things, the destruction of his beloved summer cottage due to sea level rise or a freak storm event.

Both of these we know are expected as results of the increasing levels of greenhouse gases in the atmosphere. Both are already happening.

Because I'm in Maine only for a few weeks from one July to the next, ecological changes don't creep up on me. They have a kind of time-lapse photography quality. So I can testify that sea level

rise is currently underway.

In the cottage in Maine, I work at a little table that looks out over Frenchman Bay. It's the same table that my great-grandfather sat and wrote at, and right in our sight line is a rock outcropping that was solidly part of the mainland in my great-grandfather's day and through most of my lifetime. But it has now become an island at high tide.

And I know from the Northeast Climate Impacts Assessment that sea level rise is expected to increase by as much as 33 inches if emissions are not controlled in Maine, and this places a huge risk to low-lying coastal areas and to the thousands of islands along the Maine coast.

But more of a concern than sea level rise itself is the increasing likelihood of powerful storms and the storm surges that accompany them. Much of Maine's population lives in the coastal areas. Coastal and island communities are more vulnerable to hurricanes than are inland States, and fishing communities like those in Maine risk the destruction not just of their houses, but also of

their boats, piers, warehouses, and, indeed, their lives and livelihoods.

Add to that the disruption of fishing stocks from increasing ocean temperatures, and the people of Maine are facing a huge problem. It is much to the credit of their State government that they have gotten in line behind California to adopt its tougher carbon emission standards should this waiver be granted.

Now I live most of the year in a State that has not gotten in line, but which is likely to suffer perhaps even more than Maine from climate change. Last year, Virginia saw the release of the report of the Governor's Commission on Climate Change, which detailed some of the projected changes. Once again, its position on the coast makes it exceptionally vulnerable to sea level rise and storm surges.

The report projects a temperature rise for Virginia of 5.6 degrees Fahrenheit, a sea level rise of the Chesapeake Bay of 0.7 to 1.6 meters, loss of foundation species in the bay from increasing salinity and rising temperatures, loss of coastal

wetlands, and disruption of natural systems, leading to extreme weather events, among other effects.

These projections speak directly to the extraordinary effects climate change could have in Virginia as a coastal State. And given the risk we face, I'm hopeful that should California be granted the waiver it seeks, Virginia will choose to follow its lead. For these reasons, I urge EPA to grant California its waiver.

Thank you.

MR. SIMON: Thank you.

Ms. Fletcher?

MS. FLETCHER: Good afternoon. My name is Megan Fletcher. I'm a student from Iowa. I'm currently working at the Sierra Club in D.C.

Last summer in Iowa, we experienced the worst natural disaster in our history. We experienced flooding that Iowa has never experienced before. The floods of 2008 displaced 40,000 citizens, caused thousands to lose their jobs, and created around $7 billion worth of damage.

I'm speaking to you today because I am

incredibly concerned about the impacts of global warming on our country. I also believe the EPA has a responsibility to grant the California waiver and let States take the lead in reducing global warming emissions from vehicles.

The Clean Air Act clearly recognizes California's right to set vehicle emission standards that are stronger than the Federal standards and the right of other States to adopt California's standards. Thirteen States and D.C. have adopted the California program, accounting for more than 40 percent of the U.S. auto market.

Given the compelling need to cut global warming pollution and the inevitable consequences of failing to do so, like more Iowa flooding, the EPA should immediately allow California and other States to implement emission standards for cars and trucks.

In California specifically, passenger vehicles make up nearly 30 percent of the State's total global warming emissions. Nationwide, vehicle emissions make up the second-largest source of global warming emissions. So far, the Federal Government

has done nothing to cut global warming pollution from cars and SUVs.

By granting the California waiver, the EPA is allowing the State to fill a critical gap in leadership. It is important for the EPA to allow California to do what it needs to do to combat global warming, which poses extraordinary threats to California's environment, economy, and public health. Global warming will worsen air quality, threaten water supplies for people and agriculture, and damage important ecological systems, just like the 2008 Iowa floods.

I am asking the EPA to allow California to take leadership in this fight and grant the State the ability to set its own standard, demonstrating that response to climate change is necessary immediately. In fact, the leadership shown by California has already begun to spread nationwide, even to my State of Iowa. An Iowa lawmaker has proposed that Iowa limit vehicle pollution, like California, and a public meeting was held yesterday in Iowa to discuss the issue.

If the EPA grants the California waiver and, therefore, its ability to lead on emissions regulations, more States will, without a doubt, follow suit. The impacts of global warming are too extraordinary to ignore.

The EPA has the chance to do something today about the future of California, Iowa, our Nation, and our planet. I'm asking that you make the right choice.

Thank you.

MR. SIMON: Thank you very much.

Ms. Yagjian, please?

MS. YAGJIAN: Thank you. Thank you for this opportunity to speak.

My name is Christina Yagjian, and I am here today as a concerned citizen. Professionally, I'm an organizer with the Sierra Club, and I work with hundreds of volunteers all over the country, a number of whom you've heard from today, to help fight global warming and promote clean energy solutions.

I receive calls and emails every day from people all over the U.S. who are, as I am, deeply

concerned about the effects that climate change is and will continue to have on our communities and ecosystems if we don't take action now to curb our greenhouse gas emissions.

So the EPA can be a part of the solution, and I'm here to encourage you to be a part of that today by granting the California clean cars waiver and letting States take the lead in reducing greenhouse gas emissions from vehicles.

As a resident of a planet in peril, the task ahead of us is huge, and we all need -- we need all the help we can get. We must give States who are ready the right to lead the way to a cleaner and safer environment. The Clean Air Act recognizes California's right to set vehicle emission standards that are stronger than the Federal standards and the right of other States to adopt these standards.

And as you know, 13 States as well as the District of Columbia have adopted the California program. And this accounts for 40 percent of the U.S. auto market. By cutting global warming pollution from tailpipes, these States can help to

make a big dent in the emissions reductions that we need to achieve -- to stave off the worst effects of climate change.

As a direct result of the CO2 emissions that we release into the atmosphere from vehicles, our planet is experiencing irreversible changes in climate and increased extreme weather conditions. In the U.S., we've seen these effects in wildfires, heat waves, increased extreme weather conditions.

And some examples of those that we see in the IPCC's fourth assessment report include under the category of wildfires, in the last three decades, the wildfire seasons in the Western U.S. have increased by 78 days. And this is a result of spring and summer warming of 0.87 degrees Celsius.

In regards to heat waves, since the record hot year of 1998, 6 of the past 10 years have an annual average temperature that falls into the hottest 10 percent of all years on record through the United States. An MIT report concludes that in the last 30 years, the destructive powerful hurricanes have increased 70 percent in both the Atlantic and

the Pacific. So that's another example of increased extreme weather patterns.

So, and something that's really important to note, I think, here is that these effects -- the effects that we're going to be seeing from global warming are slated to disproportionately affect the poor and communities of color all over the globe, which I think calls us to a level of justice in addition to responsibility to future generations and our own families.

So I don't need to tell you that we need to take action on global warming and that the effects, the costs enacted upon us if we do nothing is guaranteed to be world steeper than any possible cost of prevention. The science has made it clear that to avoid the worst effects of global warming, we must achieve 80 percent reductions in greenhouse gas emissions by 2050.

The activists that I work with all over the country and I are fighting tooth and nail to bring solutions to this problem, but we need the EPA's help. So I would urge the EPA to be part of the

climate change solution by granting California this clean cars waiver and allowing States the ability to lead the way to a safer and cleaner planet.

Thank you.

MR. SIMON: Thank you very much.

Questions?

[No response.]

MR. SIMON: And we want to thank you all for your testimony and your advocacy as well, too.

We've come to the point in the schedule where we don't have anybody unless -- is Alan Ford in the room? Anybody else that we've missed that wants to testify, here's your shot.

[No response.]

MR. SIMON: Seeing nobody volunteer, we have -- by practice, we will give California the opportunity, if they'd like to stand up and say any closing remarks, rebuttals, et cetera? Let the record show that there will be no rebuttal or closing remarks from California.

So, with that, we will close today's public hearing. I will note that the comment period will be

open for the next 30 days until April 6th, that the information is in the Federal Register document in terms of where you can comment and how to submit those comments. We look forward to reading them and working with all of the stakeholders as we go forward with this consideration.

We appreciate everybody's attendance and testimony today. And with that, I want to thank my panel mates and our court reporter, as well as everybody else who helped bring this forward as well.

So thank you, and I now officially close this hearing.

[Whereupon, at 3:30 p.m., the hearing was adjourned.]